

**McGRAW-HILL SERIES IN EDUCATION**  
**HAROLD BENJAMIN, *Consulting Editor***

---

**MODERN EDUCATIONAL PRACTICE**  
**A Handbook for Teachers**

*Selected Titles from*  
**McGraw-Hill Series in Education**  
**HAROLD BENJAMIN, Consulting Editor**

---

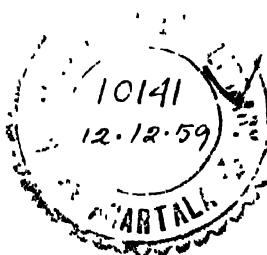
**ALLEN** · The Federal Government and Education  
**BEAUMONT AND MACOMBER** · Psychological Factors in Education  
**BENT AND KRONENBERG** · Principles of Secondary Education  
**BOGUE** · The Community College  
**BROOM, DUNCAN, EMIG, AND STEUBER** · Effective Reading Instruction  
**BRUBACHER** · A History of the Problems of Education  
**BRUBACHER** · Modern Philosophies of Education  
**BUTLER AND WREN** · The Teaching of Secondary Mathematics  
**BUTTERWORTH AND DAWSON** · The Modern Rural School  
**BUTTS** · A Cultural History of Education  
**COOK AND COOK** · A Sociological Approach to Education  
**CROW AND CROW** · Mental Hygiene  
**CROXTON** · Science in the Elementary School  
**DAVIS** · Educational Psychology  
**DAVIS AND NORRIS** · Guidance Handbook for Teachers  
**DE BOER, KAULFERS, AND MILLER** · Teaching Secondary English  
**DE YOUNG** · Introduction to American Public Education  
**FEDDER** · Guiding Homeroom and Club Activities  
**FERNALD** · Remedial Techniques in Basic School Subjects  
**FOREST** · Early Years at School  
**GOOD** · Dictionary of Education  
**HAGMAN** · The Administration of American Public Schools  
**HAMMONDS** · Teaching Agriculture  
**HECK** · The Education of Exceptional Children  
**HOPPOCK** · Group Guidance  
**KAULFERS** · Modern Languages for Modern Schools  
**KAULFERS, KEFAUVER, AND ROBERTS** · Foreign Languages and Cultures in American Education  
**McCULLOUGH, STRANG, AND TRAXLER** · Problems in the Improvement of Reading  
**McKOWN** · Activities in the Elementary School

MODERN  
EDUCATIONAL PRACTICE  
*A Handbook for Teachers*

by Paul R. MORT  
*Professor of Education*  
*Teachers College, Columbia University*

by William S. VINCENT  
*Citizenship Education Institute*  
*Teachers College, Columbia University*

*First Edition*  
*Third Impression*



New York Toronto London  
McGRAW-HILL BOOK COMPANY, INC.

## **MODERN EDUCATIONAL PRACTICE**

## PREFACE

That no school is as good as it could be is a truism. But schools can become better by making detailed changes in what is already a good, going enterprise. Seldom if ever is it possible to trade in what a school is for a completely new model.

In this respect education is like agriculture. Farming is improved, not by changing everything the farmer does, but by changing very specific and relatively small tasks that may consume only a small part of his time: better seed rotation, contour plowing, rotation of crops, analysis and fortification of the soil. The time-consuming tasks of planting, cultivating, and harvesting may be little changed. Cows are still cows; wheat is still wheat.

So with the school. The teacher's art, like the farmer's art, is the sum of what he has learned from books and what he has learned from living. What people learn from living is that magic which keeps their many discrete acts from being a meaningless jumble. The arts of living give the school unity and fiber. The work of the good teacher must always be suspended on the thread of theory and purpose. But purposes are meaningless without some way of achieving them. So improvement of the school must come from the teacher's judicious choice of specific ways of acting—ways that have meaning to him and have promise for making the teaching enterprise a better one.

Most teachers, even the best teachers, are not entirely satisfied with the way they teach. Even as most of us hope to live more satisfactorily tomorrow, so the great proportion of teachers hope to teach better tomorrow. A rich pool of practices which others have found helpful may give to teachers something to draw upon to make tomorrow more zestful, more satisfying. We live in a time when the process of devising new ways for teaching goes on apace. When the shining new-model school does emerge it will be the school of today with changed emphases. It will be stronger in developing intelligence, in preparing for the work to be done, in developing a people of character and fitness for our way of life—in achieving, in short, the seven objectives treated in this book.

NEW YORK, N.Y.

PAUL R. MORT  
WILLIAM S. VINCENT



# CONTENTS

<b>Preface</b>	<b>v</b>
<b>INTRODUCTION: How to Use This Book</b>	<b>3</b>
<b>PART ONE: Why and How This Book Was Written</b>	<b>13</b>
<b>PART TWO: A Look at What Good Schools Are Doing</b>	<b>21</b>
<b>PART THREE: Guide to Modern Educational Practice</b>	<b>33</b>
1. Stimulating Situations and Problems	35
2. Individual Adjustment Procedures	55
3. Pupil Interests	69
4. Recreational Interests	83
5. Productive Experiences	97
6. Laboratory Methods	119
7. Pupil Participation	147
8. Active Investigation	169
9. Cooperative Group Action	189
10. Creative Expression	203
11. Variety of Experiences	225
12. Variety of Materials	257
13. Community Resources	273
14. Individual Diagnosis	291
15. Varied Drill Devices	309
16. Remedial and Refresher Teaching	325
17. Enriched Teaching	335

<b>18. Study Techniques</b>	<b>347</b>
<b>19. Coordination with the Home</b>	<b>357</b>
<b>20. Coordination with the Community</b>	<b>375</b>
<b>21. Staff Participation</b>	<b>389</b>
<b>Supplement A. Thirty Psychological Guides to Good Teaching</b>	<b>401</b>
<b>B. Twenty Social Guides to Good Teaching</b>	<b>405</b>
<b>C. Acknowledgments</b>	<b>408</b>
<b>D. List of Visual Materials</b>	<b>413</b>
<b>Index</b>	<b>421</b>

# INTRODUCTION



## HOW TO USE THIS BOOK

During the past half-dozen years the authors, singly or together, have been associated with five extensive studies of educational "know-how." Each of these studies was concerned with what is emerging in this challenging period in classroom, school, and community to adjust schools to changing philosophical, psychological, and sociological insights. The first of them, a study of a hundred New York State school systems, sought to relate the characteristics of schools with cost. The second sought to discover what teachers, schools, and communities in the New York metropolitan area—the Metropolitan School Study Council—were doing that went beyond what had been uncovered by the New York State study. The third was a nationwide sampling of elementary schools by the Educational Policies Commission. The fourth was a study of better educational practices in school systems in central Pennsylvania carried on by the Pennsylvania School Study Council. The fifth is the continuing study of New York metropolitan-area schools carried on by the Metropolitan School Study Council periodical, *The Exchange*.

Each of these enterprises except the Policies Commission study collected information on both secondary and elementary school. Each enterprise, after processing the results for the purpose in mind, left a great and rich residue of anecdotal records stored away in the files. The authors have been permitted by the various organizations and groups to draw upon their rich storehouses of materials for the unique purposes of this book.

In spite of its size and the brevity of the individual descriptions, this book gives but a sample of the know-how in operation in the thousands of schools and tens of thousands of classrooms in America. For example it makes no use whatever of the most intensive search for know-how yet undertaken, the study currently being carried on by the Metropolitan School Study Council for the revision of the so-called "101 Book" (*What Schools Can Do*), a study that has engaged the extensive cooperation of more than 5,000 teachers. And it makes no use of the know-how in the

hundreds of thousands of classrooms of America that have not as yet been subjected to systematic observation.

This book is at one and the same time an attempt to put the rich materials hidden in files in an easily useful form and an introduction to a type of resource that should become vastly richer as studies similar to those drawn on here are extended into broader and broader areas.

Those who use this book will be pioneers. But we venture to predict that the teacher of tomorrow who does not take advantage of the inventive genius of his million colleagues will be considered as much a back number as the teacher now who is not aware of the great insights into the understanding of human living that have come from our psychological laboratories during the past half-century.

You will not agree with all of the practices described in this book. For the most part, good teachers have invented these practices. They invented them to serve the purposes indicated. But what one teacher finds good, another may not. It is hoped that whatever you find that you think is good you may be able to use.

No single philosophy of education is represented here. More and more the evidence points to the conclusion that the good teacher is the one who uses the most effective tools for teaching that he can find, regardless of what particular point of view or persuasion they represent. For the most part the good teacher is eclectic, taking from each school of thought whatever seems workable and good. Seldom does a good teacher follow any single set of rules to the bitter end. A great deal of common sense lies beneath a good teacher's work and planning.

It is to be hoped, therefore, that no one will adopt any practice blindly, nor be called upon to defend any practice simply because it is described in this book. Each practice described *has* been found to work. But the teacher who adapts (rather than adopts) a practice will be breathing new life into it.

Beyond this, having seen what others have invented, the resourceful teacher should be able to invent practices that are even better than anything described in this book. Education is sorely in need of better practices than any described in this book.

The descriptions of practice are purposely not too long. They are only as long as is necessary to convey the idea. Good teaching is not following a script. If every detail of a practice were given, some readers might

believe that they were obliged to follow each detail step by step as given. Each teacher must be free to adapt the main idea to his own peculiar set of circumstances. It is more than likely that any practice adopted will work better if the teacher brings to it some contribution of his own.

The good school is not a hodgepodge of practices such as those described in this book. The good school is a well integrated institution. All of the practices to be found in it add up to a sum which is greater than its parts. The various practices which you find in a good school all form part of a design for living. The task of adapting these practices and fitting them into a design for living which will serve children well is no mean task.

This book can therefore never solve the problem of turning a poor teacher into a good teacher. It can help the teacher who already possesses something of an integrated approach to his work to develop practical procedures for implementing a sound philosophy of education.

The practices which are described and the samples which are given were taken, for the most part, directly from teachers' descriptions or from reports of observers.<sup>1</sup> And they are practices which have proved workable. They vary from those which are most applicable to the one-room school of the relatively poorly supported district to those most suited to the medium-sized and large schools of the relatively wealthy district.

Most teachers today are alert to the need for change. Most teachers want to do a more effective job than they are doing. But they find it difficult to bridge the gap between what the philosophers say *should be* and what the classroom is.

<sup>1</sup> It is extremely difficult to give credit to individual teachers for the sample practices described. To trace proprietorship of an idea in any field is one of the most difficult of all pieces of research. Who first had any idea? Who first used it? The sample practices cited came from many different sources; some were part of the data of studies which had purposes somewhat different from that of the present volume. Sometimes an observer reported a practice but left off the name of the teacher observed. Sometimes an observer left off his own name and that of the teacher too. Sometimes a teacher reported his own practices anonymously. Often two or more teachers reported practices which were almost identical, and only one of them was used here. Under these circumstances it is possible only to give credit to some and to wish that we knew the names of others equally deserving of recognition. The names listed in Supplement C represent our best efforts to acknowledge those teachers whose work has been drawn upon in describing the sample practices given in this book.

This book is intended to help bridge that gap. It presents descriptions which are intended to be of practical help. But each practice is tied to an objective or group of objectives. Objectives—purposes—give practices meaning.

#### HOW TO USE THIS BOOK

This is not a book that you need to read straight through, like most books. You can turn to any page and begin to use it. Especially is this true of the larger portion of it—Part Three.

The simplest and perhaps the best way to use this book is to turn to Part Three and start reading the interesting ideas for doing things that the book contains. Any teacher of small children, older youngsters, or even of college students will soon find ideas that he will want to adapt to his own work. Accordingly, you may want to read this book as you would a "whodunit," but there are other ways of going at it. You may be interested in directing your reading to practices designed to serve one of the purposes discussed in Part Three or to follow up practices tied in with particular psychological or social purposes discussed in Part Two. We may hazard a guess, however, that most readers will be clear enough as to the use they will want to make of the practices without the more consciously reasoned approach. Both writers remember many pleasant and horizon-broadening hours spent in perusing Sears, Roebuck and Montgomery Ward—those massive catalogues of the modern arts. Neither recalls that he was asked to read a section first on the design for living.

But if the reader wishes the guidance of the designs the writers have had as screening instruments for examining these arts of teaching, he will find these designs arrayed conveniently in Supplements A and B.

There are primarily four other ways to use this book—three ways for teachers, one way for administrators and supervisors.

**1. Decide What You Want to Do and Then Look Up Ways of Doing It.** Most teachers, however good, are concerned about doing a better job of teaching reading, writing, and arithmetic. Most teachers know that there are some other fundamentals to be accomplished in school which are just as important—character, for example. Large numbers of teachers and laymen are critical of the job that schools in general are doing in the field of citizenship education. This field must be improved. The classroom teacher has a most important part in it. There are many other

objectives which schools must learn to attain more effectively than they are doing at present.

What would you like to do better? Where would you like to begin to build up the tools with which you work? With character? With citizenship? With reading, writing, and arithmetic?

If you wish to start with recognized types of needs, then you should examine the objectives described in Part Two. Listed with each objective are the practices meant to attain it. Refer to Part Three for descriptions of these practices and for a number of samples which you may adopt or adapt as you see fit.

*2. Look Up Interesting Practices and Judge What They Can Accomplish.* Leaf through the practices described in Part Three. Some of these you may have used, but many will be new to you. Some of them may possibly intrigue you. You may have wanted to do similar things in your own classroom for many years, but didn't know quite how to go about them. You may have wanted to do certain things which have come to be thought of as "modern" but didn't quite see their value. You may have viewed them as "fads and frills." Or you may have carried out some practice similar to what you read here without stopping to consider the full range of underlying purposes it can serve.

Each practice described in Part Three is briefly explained. This explanation is an attempt to clarify the conditions under which it seems desirable to use the practice. After this explanation there are "Reasons Why" this practice appears sound—two kinds of reasons, and both must always be taken into account: (a) reasons based on the science of learning—what psychology tells us; (b) reasons based upon what society expects of its schools.

Next are given examples. Choose from these. Adapt, modify, and improve them in terms of the conditions in your own classroom. Keep in mind the purposes they are meant to attain. And wherever you can, devise practices of your own to attain these purposes even better.

*3. Look for Ways of Helping Solve Some of Your Most Critical Problems of Teaching.* What are some of the problems that plague you? What problems do you face most often, without—as yet—any satisfying solution? Is it . . .

Getting students to take the work most suited to them?

A difficult disciplinary case?

Correlating subject matter?

Organizing extracurricular activities?

Improving relations with parents?

Whatever your problem is, you may perhaps find help in this book. For problems that you have, others have had, too.

Use the Index to locate practices bearing upon your problem. Items in the Index are classified according to recognized school and classroom problems. Look up your problem in the Index. Opposite its listing the related practices will be referred to by page number.

The practices have been classified according to the grade levels to which they are adaptable. Examples of headings are "All Age Groups," "Lower and Middle Grades," "Middle Grades and Junior and Senior High School." It is not surprising, however, that an idea may often be useful at any age if it is adapted to the age of the youngster. You will perhaps find practices with broader application than the authors have discerned, so take a look occasionally at the practices classified in grade levels other than that of your pupils. Some of these practices have been found highly useful even for graduate students.

*4. Get Leads from This Book to Ways in Which You Can Improve Your School.* There is one practice (No. 21) devoted entirely to administrative concerns. It does not by any means cover the whole gamut of administrative procedures. Such a treatment would require a whole book of its own. But other parts of this book contain many administrative implications. Regarding every practice described here the administrator can ask himself:

What could I do to encourage teachers to adopt this?

What should I do to make it easier for any teacher to do this?

What organizational changes are necessary to make this practice work effectively if some teachers want to adopt it?

What equipment, materials, time, and other provisions would teachers need in order to make this practice work?

The administrator can use this book also to check his school in those subjects or areas or at those levels where he feels his school is not as it

should be. If he is interested in improvement in any of these subjects or areas or at any of these levels, he can look for specific practices that should promise improvement. He can make the book available to faculty members. He can make a study of it the main topic of a series of faculty meetings or conferences. The book can be taken up practice by practice. Teachers can be asked to examine the sample practices and to

Indicate which ones they would like to try.

Indicate what changes they would make, what special facilities they would need.

Describe improvements in the practices given here.

Describe inventions of their own which would be better than the practices given here.

If this book is used as a text for a series of faculty meetings, it would probably be helpful to begin each meeting with an appropriate film<sup>2</sup> depicting various practices in use.

#### LIMITATIONS OF THIS BOOK

This is a book on general practice, not specialized practice. That is to say, most of the practices and most of the samples described here are primarily for the general classroom teacher—in both the high school and elementary school. They are not intended to serve the major needs of the educational specialist.

There are a number of educational specialties. The most common ones include:

Guidance counseling and guidance practice.

Elementary-school reading and remedial reading.

Speech analysis and remediation.

Education of the mentally and physically handicapped and of the mentally superior.

Psychometry and other psychological techniques.

Art education.

Music education.

Industrial arts and vocational education.

Library science.

<sup>2</sup> See Supplement D.

It is true that there are in this book some practices touching upon each of these specialties. But those given are either (1) suitable for the general teacher to use or (2) suitable for the general teacher to adapt to his own particular practice or subject or level.

Each of these specialties is characterized by a large body of technical procedure which is outside the scope of a book on general practice.

# PART ONE



# WHY AND HOW THIS BOOK WAS WRITTEN

Two causes are in large part responsible for the changes that have been taking place in schools. They are making schools of the twentieth century differ widely from schools designed on the old 1900 model.

The two causes are (1) improved understanding of *psychology* and (2) improved insights into the nature and needs of *society*.

Either one of these causes working by itself would have been enough to cause great ferment in education. But coming together, their effect has been tremendous. Both were accelerated at about the same time. The year 1900 marks a turning point. At about that time *educational psychology* was beginning to emerge as a science. At about that time, too, changes began to accelerate in our *society* which have made it enormously different from nineteenth-century society.

*Developments in educational psychology have made for changes in method.* In the past fifty years more has been discovered scientifically about how people learn than in all the previous centuries of history.

*Development of our society and understanding of it have made for change in the types of services that our schools are called upon to render.* The pattern of our social life has changed so in the past fifty years that our concept of what schools should do in our society has undergone tremendous revision since 1900.

## WHAT IS A GOOD SCHOOL?

Good schools use new insights furnished by psychology to change their *methods* of teaching. They use new social insights to help them decide *what* they are going to teach. Schools that have not changed, at least to some extent, from 1900-model education cannot be viewed as good schools for today.

Schools have responded to these new psychological and social insights. But some schools have responded faster and more completely than

others. We describe as "good" those schools which have adapted their procedures to take account of the causes of change in education.

### WHAT PSYCHOLOGY AND SOCIETY HAVE TAUGHT US

*There are at least thirty guides to teaching that psychologists have fairly definitely clarified for us during the past fifty years.* Any teacher who is not hitting on all thirty is not doing as thoroughly efficient a job of teaching as he might do. Few, if any of us, are. For it is one thing to know what this basic science in education—educational psychology—tells us about how people learn, and it is another thing to apply this knowledge practically in the classroom.

*Similarly, there are at least twenty guides to teaching and organizing the schools that may be discerned from the kind of society we live in.* This society has undergone enormous change during the past fifty years. And it is still changing. Anyone who has studied history is aware of this. Transportation and communication are much more rapid. The manufacture and distribution of goods has changed enormously. The emphasis on national government, the growth of corporations, associations, and unions, the change from a rural and small-town society to a largely urban society, the change in the status of the home, these are some of the many, many changes that have taken place in our society.

No school can be doing its full job if it is not adjusting its program to account for these changes.

Whatever a teacher does in a classroom should have some relation to one or more of these thirty psychological guides and to one or more of these twenty social guides. Near the beginning of each section of Part Three there are listed those of the psychological and social guides that apply to the type of practice dealt with. They are called "Reasons Why." *All thirty of the psychological guides are listed together in Supplement A. Similarly all twenty of the social guides are listed together in Supplement B.*

### THE TOOLS TEACHERS USE

The teachers and administrators of good schools have used the new insights from psychology to change their methods of teaching. They have used the new social insights to help them change and expand the educational services and opportunities which they believe schools should

provide. The result is a body of educational know-how that is quite different from the handful of teaching procedures commonly in use half a century ago.

It is the purpose of this book to present a large sampling of this body of educational know-how.

Each practice described in this book is a tool—a tool for teaching. All teachers have many tools in their kits; some have more than others. Almost any teacher could use a few more good ones.

Some teachers are using up-to-date tools; others rely too heavily upon tools that have become superseded. But almost no teacher is using in every aspect of his teaching the most effective procedure which is available.

The addition of just one more good, effective, up-to-date teaching procedure improves the job that any teacher is doing. It is not necessary that a teacher turn his whole world upside down in order to improve. It is not necessary that he throw away all that he has and take on everything new. The taking on of *one* new practice—if it is better and more effective for the purpose than the old practice it supersedes—makes for improvement.

Studies of change in education show that this is largely the way in which schools have improved. As new insights are gained, new procedures are adopted. Some old procedures persist because we still have nothing better to take their place. Other old procedures are dropped because there are new, proved, better practices to take their place.

Practically, then, teachers are *not* divisible into two camps—*progressive* and *conservative*. Some adopt changes more rapidly than others. That is all. But there is no teacher who is not willing to change to *some* extent, to adopt at least *one* new practice, if he is convinced that the new one is a more effective teaching procedure than the old one it displaces.

### INVENTING NEW TOOLS FOR TEACHING

Education is not greatly different from some other fields. Perhaps we have never recognized it before, but we in education have a technology. You have a technology when you have two things: (1) a basic science; (2) a body of inventions.

In the heating industry, for instance, the basic science is physics. A great deal more may be known scientifically about heat than is used in

house-heating systems. When new discoveries are made in the basic science, somebody has to invent a way of using the new discovery. He invents it, when he does invent, out of his knowledge of the science and out of his practical know-how. And a body of inventions makes a technology—a way of doing things.

Therefore we in education have a technology. Educational psychology and sociology are our basic sciences. And more and more is being discovered year after year about how learning takes place. Yet if you look at almost any school you will find a great deal that is technologically out of date—ways of teaching, ways of organizing, even the things that are taught for the reasons that they are taught.

Yet every practice that is used by a teacher was at one time invented. Every arrangement for education that we have in our schools, no matter how involved or how simple it may be, was at one time invented. For there was a time when nobody used it. And then there was a time when somebody thought it up and used it for the first time. The person who thought it up had a purpose in mind; he also had to have some background in education, either practical or scientific.

Every teacher has a technology. This is the sum of his practices, whether good, poor, or indifferent, many or few. The practices in this book are all relatively modern inventions—modern that is to say, within the past few decades. For the most part they were invented by teachers.

*This book is an invitation* (1) to any teacher who wishes to do so to *add* to his own kit of teaching tools one practice new to him or as many such practices described here as he desires to adopt or adapt, (2) to any teacher resourceful enough to do so to *invent* a practice to serve a purpose better than any described in this book or make as many such inventions as he can.

#### HOW THIS BOOK WAS WRITTEN

Over 10,000 teachers in more than 200 different school systems have been participants in the various studies from which the descriptions in the present book result. In some instances teachers were asked to describe their practices, especially those practices which they considered unusual, outstanding, interesting, or exceptionally workable. In other instances teachers were observed and their practices described by field

workers. The twenty-one practices in this book represent a selection from more than 6,000 such descriptions.

These thousands of practices were examined in terms of what they are intended to do for pupils. It appears that there are *seven major educational objectives* which the teachers and administrators of good schools attempt to accomplish by means of practices like those described in this book. Such schools are providing what may truly be defined as a *modern* education, as distinguished from an education whose know-how is behind the times. Just as modern medicine, transportation, electronics, merchandising, and manufacturing use the best technological know-how at their command, so too schools, to be modern, must use the best educational know-how of which they are aware.

Such an education has powerful influences on society, resulting in better work, better use of money, better homes, better citizens.

Such an education also has great effectiveness in drawing out the individual capacities of pupils, resulting in happier lives, fuller interests, greater personal efficiency.

Here are seven major objectives. They are described in detail in Part Two:

- a. Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b. Uncover and develop many different kinds of special talents in individual pupils.
- c. Guide pupils in learning to think.
- d. Develop desirable character and personality in pupils.
- e. Develop good citizenship.
- f. Develop attitudes and habits of good health and safety.
- g. Use the full resources of community and staff in planning the program of education.



# P A R T   T W O



# A LOOK AT WHAT GOOD SCHOOLS ARE DOING

Seven Objectives the Teachers and Administrators of Good Schools Are Attempting to Accomplish through Their Practices:

*a. Good Schools Are Doing an Ever Better and More Effective Job of Teaching the Basic Skills and the Basic Fields of Knowledge.*

Good schools are not neglecting the three R's and the fields of subject matter. To improve literacy and to pass on certain "fundamental" facts was the first purpose of schools. Good schools still adhere to that purpose, but in a much expanded fashion today, for there are so many other things that need to be done in schools. But while doing these other things, good schools today are also teaching reading, writing, arithmetic, and the other common subjects better than schools have ever done before.

The contribution which modern teaching technique has made to the teaching of the basic skills and the basic fields of knowledge is outstanding in two respects:

1. *The teaching of a large variety of skills and many fields of knowledge.* There are far more than just three R's. The skills of thinking and communicating are many. There are many different kinds of reading—pleasure reading and work reading, reading to get the main idea, and reading for details. Arithmetic skills include reading, reasoning, and computation. There are many kinds of writing, including typewriting for general use. And speech is one of the oldest communication skills of all and the one most used by everyone, whether before audiences, on the radio, or in the home or occupation. Reading, writing, and arithmetic—considered as the *only* three—are hardly a sufficient number of skills for today's needs.

The same may be said about knowledge. For at any grade level the things which children may need to learn are not contained in a small handful of subjects. Nor are the many areas of knowledge in which modern human beings need to be expert contained in the four or five subjects we used to think of as making up the typical school program.

*For example:* Even the high school is not exempt from teaching *some kinds* of reading—reference reading, periodical skimming. A high school pupil who cannot understand the language of a physics book needs to be taught how to read physics if he is to learn the subject at all. He cannot be taught to read physics in the elementary school, where the subject is normally not taught.

2. *The teaching of skills and knowledge in relation to their use.* Good schools do not teach facts solely as isolated bits of knowledge. Facts are taught in a pattern; knowledge is *used* to get answers to problems. Unless knowledge is useful to a person it can hardly have value. It is useful because the person enjoys it, because it satisfies some basic human or social need, or because it enables the person to live a better life, earn more money, or be a better citizen. If knowledge cannot be shown to be useful in some significant way, it hardly deserves to be taught in schools.

If knowledge is to be used it should be taught in relation to its use. A fact makes sense only when it is seen as related to other facts. All useful facts are part of a pattern. Useful facts are tools to understanding, to be used in the formulation of hypotheses or in the solution of problems. Facts which are isolated bits of information, which are not seen by pupils as parts of a pattern, as useful tools to the solution of problems, are relatively difficult to learn, difficult to remember. Specifically, good teachers in good schools try as much as possible to have pupils use the facts which they are in the process of learning to get the answers to problems.

The same may be said of the skills—speech, writing, numbers, the several kinds of reading. Good teachers do not lean heavily on the promise that pupils will find the skills they are learning useful “when they grow up.” The usefulness of the skills should have meaning for pupils as they are being taught.

*For example:* Percentage takes on meaning when pupils operate a store and have to calculate the percentage of profit on each item they sell in order to make sure that their sales will pay their overhead. From this experience other real life uses of percentage are demonstrated and seen.

*If you wish to do a better and more effective job of teaching the basic skills and the basic fields of knowledge, use any of these practices:*<sup>1</sup>

<sup>1</sup> Practices are given detailed, chapter-length treatment in Part Three.

Stimulating situations and problems  
Pupil interests  
Productive experiences  
Laboratory methods  
Active investigation  
Variety of materials  
Community resources  
Individual diagnosis  
Varied drill devices  
Remedial and refresher teaching  
Enriched teaching  
Study techniques

*b. Good Schools Uncover and Develop Many Different Kinds of Special Talents in Individual Pupils.*

Good schools try to make the classroom and the whole school as rich a place as possible for pupils to get experience in many different fields of activity. The sum of human talents numbers into the thousands. Vast numbers of these talents are needed to run the world. No handful of subjects can possibly test a pupil's aptitude for thousands of activities, nor can a few studies develop his talents adequately in more than a few fields.

Good teachers in good schools try to help individual pupils, through experience and tryout, to find out what they can do best. This means that the school must mirror in its own activities as many useful activities as there are in life. As they are tried out at different kinds of activities, pupils may be observed. Their success or failure at specific activities can be assessed, and some insight secured as to their future promise.

As talent is uncovered, it must be developed. Again a vast number of experiences is needed—in classroom, club, other school activities, and community activities—in order to develop and mature these talents in each pupil as fully as possible. The good school thus becomes a gigantic year-by-year tester and developer of aptitudes.

*For example:* In kindergarten John made toy boats, in third grade he designed and cast metal book ends, in sixth grade he constructed a steam engine, and in junior high school he made a radio out of old parts. He

cared very little about birds, had little success with his garden plot, and did not find the microscope as thrilling as George did. Such bits of evidence, together with test results, can help a teacher guide both John's and George's unfolding talents.

*If you wish to do more about uncovering and developing the special talents of pupils, use any of these practices:*

Individual adjustment procedures

Pupil interests

Productive experiences

Laboratory methods

Creative expression

Variety of experiences

Variety of materials

Community resources

Individual diagnosis

Enriched teaching

*c. Good Schools Guide Pupils in Learning to Think.*

Good schools try to provide a setting in which pupils may learn to think—by thinking. Experience is the best teacher. Especially is this true in learning to think. Pupils cannot learn to think in situations where all their thinking is done for them. The school may run more smoothly where the teacher does all the deciding, all the commanding. But schools are not set up primarily for the purpose of running smoothly. They are set up for learning. And learning is seldom a smooth, easy process.

Memorizing a pattern of thinking which some one else has worked out is not learning to think. Therefore good teachers do not rely too heavily upon carefully developed logical systems in textbooks to teach pupils to think.

Different kinds of situations call for different kinds of thinking. A good thinker in a scientific field is not necessarily a good thinker in business or politics. Thinking is highly specific to the kind of enterprise in which thinking is required. Therefore good schools provide different kinds of enterprises—social, scientific, commercial, mechanical—to give pupils opportunity to think in different situations.

But one does not think without evidence. The drawing of sound conclusions must be based upon fact. Taking somebody's word for the evi-

dence is not learning to think. Therefore good teachers make it possible for pupils to have some practice in securing firsthand evidence. In science classes they secure firsthand evidence directly from nature or by means of the laboratory tools designed to secure evidence. In social-studies classes they secure firsthand evidence from polls and surveys and by means of other tools designed by social scientists.

*For example:* Instead of using one textbook (which frequently tells not only *how* to think but *what* to think) a social-studies class uses many different books, pamphlets, magazines, and newspapers. Pupils may note discrepancies. Then they check back on the sources, compare authorities, secure data of their own, and learn to draw their own conclusions.

*If you wish to do more in helping pupils learn to think, use any of these practices:*

- Stimulating situations and problems
- Productive experiences
- Laboratory methods
- Pupil participation
- Active investigation
- Creative expression
- Variety of materials
- Community resources

*d. Good Schools Develop Desirable Character and Personality in Pupils.*

Good schools provide a lifelike setting for the development of character and personality. Character develops in action. Pupils come to have the trait we call responsibility by having been given responsibilities. But the responsibilities given a pupil must be neither too difficult nor too easy for him if he is to learn by them. Good schools provide in their settings many opportunities for individuals and groups to take responsibility, to practice good manners, to be sincere, honest, courageous. Life itself is full of situations where such traits are needed. School life is full of life situations where these traits may be developed.

Good schools provide settings for natural personality growth in order that satisfactory adjustments to the challenges and the frustrations of life may be made by pupils. Where maladjustments occur outside the life of the school (or at times within the life of the school) good schools

provide special treatment in the form of counseling, case study, and other forms of analysis and treatment.

Good teachers carefully observe the growth of character. They test it frequently. They let it grow by giving it room in which to act. But in a good school character develops in satisfactory directions when it is under the constant guidance of a good teacher.

*For example:* A dance, party, or luncheon is a rich teaching situation for an observant guide of character growth. Sally is a little too aloof; she must be given more opportunities to develop friendliness and poise with smaller social groups. Harry has suddenly stopped showing off and has come into a position of real leadership.

*If you wish to do more in developing desirable character and personality in pupils, use any of these practices:*

Individual adjustment procedures

Pupil interests

Recreational interests

Productive experiences

Pupil participation

Cooperative group action

Creative expression

Variety of experiences

Individual diagnosis

Coordination with the home

Coordination with the community

*e. Good Schools Develop Good Citizenship.*

Good schools make classroom, club, and school as much as possible self-governing societies, so that pupils may learn the ways of democratic citizenship by the practice of good citizenship. The school is a simplified version of society so that, in it, pupils may learn to take their places in society.

Self-government in schools is not designed solely for the purpose of running the school better than it might be run otherwise. It is designed so that the school may indeed be an educational institution—in the education of citizens. The citizenship opportunities in a good school mirror the citizenship activities in society itself. The tools of government and citizenship are as much in evidence in the school community as in the

adult community. These tools—voting, campaigning, nominating, speech-making, policing, lawmaking, administration, judging offenders—are practiced by pupils at every age. Mistakes are made, it is true, just as pupils make mistakes in spelling. Making mistakes is closely associated with learning. But the place to make mistakes in citizenship and to learn how to avoid them is the school.

As pupils learn to be good citizens in a good school, under the guidance of good teachers, they practice over a period of years the tools of citizenship. When they reach the age of citizenship it is intended that they shall have the skills and insights they need to discharge their function as citizens.

*For example:* John was twenty-one last year and voted for the first time in the presidential election. But it was not the first time that he had ever voted. He had voted hundreds of times. In his classes and clubs and in the school elections he learned how to vote. And he learned how to judge candidates, how to listen to campaign speeches, how to distinguish promises from possibilities, and how to judge the qualifications for office.

*If you wish to do more about developing good citizenship, use any of these practices:*

- Stimulating situations and problems
- Individual adjustment procedures
- Recreational interests
- Productive experiences
- Laboratory methods
- Pupil participation
- Cooperative group action
- Variety of materials
- Community resources
- Coordination with the home
- Coordination with the community

*f. Good Schools Develop Attitudes and Habits of Good Health and Safety.*

Good schools teach health, but not only from books. A knowledge of health rules, a headful of health facts will not guarantee healthful habits. Knowledge is important, but it has only a place. Care of the teeth is a habit, based on practice; practice is persisted in because of an attitude

that is stronger than mere knowledge of tooth decay. Every teacher knows this.

Good teachers see that pupils learn healthful habits by practice. The school is full of places where healthful habits may be practiced. The school lavatory is as much a place to learn as is the classroom or the playground. The school cafeteria is not just a place to satisfy hunger, but (among other things) a place to learn the selection of foods. And these places for practice (the laboratories of health) about the school, as well as at home, must be tied in usefully with facts of health studied in the classroom. Through knowledge and practice, good teachers in good schools try to develop attitudes toward health that will last after pupils have left school.

The same may be said for safety. The places for practice are on the routes to and from school, on bicycles, in driver training cars, on school stairways and in corridors, on the playground, and in gym. Safety is made a habit when what a pupil has learned is judged by his safe behavior on a bicycle, in a car, or on the street.

*For example:* Instead of relying upon textbook information that flies are carriers of disease germs, a teacher and the class prepare a culture plate. They catch flies from different locations and let each fly walk on the plate. Each fly's tracks are labeled. From the culture of germs the pupils are able to determine which fly, from which location, infected the plate with the heaviest load of germs. Or a teacher, realizing that brushing the teeth is a habit that comes from practice, has a row of toothbrushes hanging in the room—one for each pupil. Part of the activities after lunch consists of regular toothbrushing.

*If you wish to develop attitudes and habits of good health and safety, use any of these practices:*

Stimulating situations and problems

Pupil interests

Recreational interests

Productive experiences

Laboratory methods

Active investigation

Individual diagnosis

Coordination with the home

Coordination with the community

*g. Good Schools Use the Full Resources of Community and Staff in Planning the Program of Public Education.*

Two agencies working together are largely responsible for good schools wherever we find them. One of these is, of course, the teaching staff. The other, and no less important, one is the public.

*Good schools harness the power of the public to the task of making the public schools better.* Of all the influences which bear upon the quality of a school's work, the attitude of the public toward education is one of the most powerful. In our democracy it is the public's task to decide whether the schools are to improve or whether they are to stand still. The public schools are *the* public institution. The public can hinder the improvement of the schools and it can help them—and powerfully.

The teachers and administrators of good schools keep their public informed about what they are doing, about the direction in which the schools are moving. And they interpret to the public the purpose and meaning of newer practices which they are using.

The teachers and administrators of good schools seek ideas from the public. For no one group has the right to dictate the procedures by which the coming crop of citizens is to be prepared. Nor do they command all of the resources for doing it. Many members of the public are as astute and discerning as members of the teaching profession. There are many keen observers of life outside the teaching profession. Where their ideas are sought and implemented, the schools are better.

*Staff participation is one of the most effective means of improving the schools.* Improving the schools is a central problem for every school person today.

Any school staff contains persons who are close to the problems of education day by day. Almost any staff contains some persons who have ideas on how the school and its management may be improved. Not all of these ideas are workable; not all of them are good. But the better the staff, the greater the likelihood of a large proportion of sound ideas. Administrators of good schools realize that no one person—administrator or not—can begin to have the insights which lead toward improvement that the many persons on a good staff may have. They are therefore democratic administrators—because democratic administration pays off.

*For example:* A study of teachers' ideas revealed twelve ways the teachers of the school thought the school could and should improve.

These suggestions, arising from the teachers themselves, were made the basis for a series of small-group meetings held for the purpose of blueprinting changes. From public participation have come such things as a complete health checkup of preschool children, provision by industry of expensive equipment needed in the vocational program, use of shops and stores in the community for work experience, strong support of budget increases, sponsorship of clubs and other groups by laymen, community-school cooperation on a housing development.

*If you wish to use the full resources of your community and your staff in planning your program of education, use any of these practices:*

Coordination with the home

Coordination with the community

Staff participation

# P A R T   T H R E E



# GUIDE TO MODERN EDUCATIONAL PRACTICE

Twenty-one Teaching Procedures with Descriptions, Sample Practices, and Reasons Why:

1. Stimulating Situations and Problems	11. Variety of Experiences
2. Individual Adjustment Procedures	12. Variety of Materials
3. Pupil Interests	13. Community Resources
4. Recreational Interests	14. Individual Diagnosis
5. Productive Experiences	15. Varied Drill Devices
6. Laboratory Methods	16. Remedial and Refresher Teaching
7. Pupil Participation	17. Enriched Teaching
8. Active Investigation	18. Study Techniques
9. Cooperative Group Action	19. Coordination with the Home
10. Creative Expression	20. Coordination with the Community
	21. Staff Participation

Nos. 1, 2, 3, and 4 are the *motivational* practices. They are concerned with providing a stimulating and satisfying environment in which pupils may work and live.

Nos. 5, 6, 7, 8, 9, and 10 are the *developmental* practices. They are concerned with developing the social, creative, and intellectual skills and insights of individuals and groups.

Nos. 11, 12, and 13 are concerned with the *resources* of teaching.

Nos. 14, 15, 16, 17, and 18 are the *individual* practices (as is No. 2 also). They are concerned with uncovering individual difficulty and developing individual competence to its highest capacity, especially in the field of skill and knowledge teaching.

Nos. 19, 20, and 21 are concerned with *coordination* of the educational enterprise, with harnessing for greater effectiveness all of the people and agencies which bear upon the educating of youngsters.

Each of these practices is described and illustrated in detail on the pages which follow.



# Practice 1: STIMULATING SITUATIONS AND PROBLEMS

*Using Situations that Stimulate Pupil Interest  
and Problems that Challenge Pupil Thinking as  
Part of a Purposely Designed Educational Set-  
ting*

*Use This Practice to<sup>1</sup> . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- c.* Guide pupils in learning to think.
- e.* Develop good citizenship.
- f.* Develop attitudes and habits of good health and safety.

THE first task in teaching is motivation. Motivation is a problem of presentation. It makes all the difference in the world, as any good teacher can testify, just *how* a new subject or a new problem, or a new topic, or a new project is presented to a class. Probably almost any kind of topic could be presented to almost any kind of class in such a way that the class would embark upon it with enthusiasm. All too frequently the opposite is the case—they may embark upon it, most of them, but they do it because they know they won't pass if they don't. Because interest is a great power in learning, the former situation is much to be desired.

All teaching goes on in a setting. "The teaching situation" we call it. Now this setting can be as bleak and bare as the battered top of an old

<sup>1</sup> The objectives listed at the beginning of each Practice are explained in Part Two, and the identifying letters correspond to the lettering in that section.

school desk—four walls, with nothing more cheerful on them than black slate, surrounding five or six rows of military-like seats and desks. Or this setting can be as rich and alive as a child's mural. Walls hung with work in progress, or the records of past achievements temporarily on display, or exhibits to stimulate interest in a new adventure, surrounding a classroom flexibly administered and containing a library corner, a science table, a workroom, a discussion and committee corner, a museum table—this describes a good elementary-school setting. (It can readily be translated to describe any good high-school class.)

Whether a teacher has all the things that go to make a good setting may depend upon circumstances outside his control. But if he does have such things, he must be able to manage them. And whether or not these things have been provided by the administration, any teacher can improve the educational quality of the setting in which he teaches. Not *decoration*—that is not the word. But if a teacher expects a class to embark upon a new study with enthusiasm, should there not be something about the room that would suggest the great importance of this new topic—something that would spark interest? It may be nothing more than a bulletin-board display of pictures, or a table full of related objects for pupils to handle, or a map with pointers and intriguing questions. The kind of approach that a teacher makes to a new study is limited only by his ingenuity in using Stimulating Situations and Problems; not only the kind of approach but also the continuation of the original flavor and feeling during the course of the study. Sometimes the approach is highly personal; sometimes it is highly challenging; sometimes it paints the new study as one of utmost importance; at other times it invokes a plain spirit of fun. But good teachers are adept at creating teaching situations in which pupils want to learn and at presenting problems in such a way that pupils want to solve them.

*The key is to match the presentation to the pupils*—to their interests, their needs, their maturity, their past experiences. It is a process like advertising. Advertising is a kind of teaching, too. Advertisers have learned to use the appeals that teachers too should use—if not for the same purposes, nor to the same extent.

In a sense this practice is basic to the whole educational operation. The school is a highly specialized kind of setting—a setting that is specially designed (or should be) for teaching purposes. The problems that are undertaken there are specially designed (or should be) so that the pupils

who undertake them will achieve what we want them to achieve. Whether or not a teacher consciously designs and develops the setting in which his pupils work, whether or not he carefully tailors the problems they are to study to their needs and maturity, he is always working in a situation that is designed (well or poorly) for educational purposes. Even so simple a thing as handing out a textbook and assigning pages is part of an educational design.

### SAMPLE PRACTICES

The practices are classified according to obvious grade range of applicability, as follows:

1. Lower Grades
2. Lower and Middle Grades
3. Lower and Middle Grades and Junior High School
4. Middle Grades and Junior High School
5. Middle Grades and Junior and Senior High School
6. Junior and Senior High School
7. Senior High School

### LOWER GRADES

1. *Reading and Discussion.* In our discussions in our reading groups I try to lay heavy stress on meaning—emphasizing thought rather than the mechanics of reading. In introducing a new story, for example, which the children have not yet read, I use questions like this: “What would you do if you couldn’t find the person with whom you were playing ‘hide and seek?’”—when the story touches upon an incident of this sort. Or “Where would you go if you wanted to find a large number of bats?”—in the case of a story about Carlsbad Caverns. Sure that bats would be unknown to some of the children, I secured pictures of bats that I passed around for discussion. Reading goes faster if the thought can be anticipated.

2. *Recording Experiences.* Early in the school year the children of Grade 3 are encouraged to tell about things they see and things that happen to them. This usually starts by the teacher saying, “Children, I saw something this morning which made me laugh.” Next morning instead of the word *laugh*, he uses the word *happy*, or *angry*, or *sad*, or *excited*.

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. No one learns without feeling some urge to learn. It may be fear, need, inborn drive, curiosity, mystery, challenge, importance, or personal attachment—or any other motivating force. The force has to be there. And the more the force wells up out of the person himself, the more the person will learn of his own accord.

2. What a person learns is influenced directly by his surroundings. This means that if you want a person to learn something, make that thing a part of his environment, so that he may see it, live with it, be influenced by it.

3. A person learns most quickly and lastingly what has meaning for him. Meanings which the teacher sees, the pupils do not always see. Some people like to learn about movie stars, and some like to learn about astronomy. In either case the subject means something. If you want a student to attack a problem, make him see from the beginning that the solution will mean something to him.

4. When an organism is not ready to act, it is painful for it to act; and when an organism is ready to act, it is painful for it not to act. These two sides of the same truth mean that teachers, to be successful, must spend some time in preparing learners to learn. Students will learn most effectively what they are ready to learn, what has been made a part of the setting in which they live.

### SOCIETY SAYS:

5. Make the investment in time and money count. The time that pupils spend in school is worth something. It is time that society has invested in them. Otherwise they might as well be working—and producing. The money that society invests in education should be efficiently spent. Therefore schools should use the best means available for motivating pupils, that their learning will be efficient and lasting.

6. Keep your eye on the real and significant concerns of human living. One purpose of society's investment is the hope that the new crop of citizens will be at least as able to cope with modern problems as their elders were with their problems. Therefore the teacher should draw the attention of pupils, by whatever means he can, to issues, facts, and acts which are basic to our society.

## SAMPLE PRACTICES (Continued)

Some morning the thought is changed from what was seen to something which happened that caused one to laugh, to be sad, to be happy. This is done regularly every morning; the children are soon talking and telling their experiences also. One morning the teacher writes his experience on the board. The teacher does this for several mornings and waits to see what happens. The children also start writing. After the children have had considerable experience and freedom in writing little things, the teacher begins to express his experience in rhyme. Before long the children are doing the same. A regular and continuous practice of this sort can be used by the teacher to lead children gradually into almost any activity or creative experience. Care must be taken in matching the experience to what the children seem ready for.

3. *Pets in School.* We use real, live pets in our first grade to develop children's interests. They are especially useful in building interest in beginning reading. One of our most unusual pets is a hamster. We call the animal Susie. She is a very interesting little animal, clean and harmless. Being small, she is easily handled. She likes to sleep in little boys' pockets. She is friendly with some of the other pets—the cat and the bunny, but she doesn't like tadpoles. Many things happen every day in connection with Susie. These can be readily used in building our interests around the story which we are writing about Susie. "Susie Comes to School" is the name of it. We write experience stories which we intend to compile into a class book with many illustrations. Children love to paint or draw Susie in some of these interesting situations and then explain their interpretations to the rest of the class. They come to school eagerly to see her, feed her, or rub her sleek furry coat. From recording, reading, and reviewing their stories about her, some of the more able first graders are now reading quite fluently—and without any pushing—on a second grade level. I am convinced that a real pet in the classroom is one of the best of tools for a teacher of beginning readers.

4. *Studying Community Activities.* At least once each year I try to develop a unit for my third graders which is connected with some current community problem or activity—Community Chest drive, Red Cross drive, resurfacing of streets, influenza epidemic, and so on. The impor-

tant thing for my purpose is to study one of these at the time it is going on or is of current interest in community conversation. This study gives the children a background to enter into home discussions; they begin to feel that they are a part of adult life. Sometimes I select a topic by inquiring of parents what is of most interest in their family conversations at a particular time.

5. *Invitation to Reading.* We use the wall spaces in the halls of our large old building. We hang them with attractive posters containing appropriate pictures and catch questions to arouse interest in reading good books. For example: "What happened to Spotty on his birthday? Read *Spotty*." Or "How did Peggy get her skates? Read *Ice Skates*."

#### LOWER AND MIDDLE GRADES

6. *Individual Reading.* Most of our reading is individual reading. In order to do this kind of teaching adequately a large room-library is almost a must. With one book the reading method must necessarily rely on the old-fashioned device of pupils taking turns at oral reading. This is a wasteful and out-dated device, and oral reading is scarcely ever used in real life.

To develop individual reading, an atmosphere of books must prevail; they must be displayed interestingly—as though some of the most wonderful experiences are to be found in reading them, which is indeed true. Therefore our room looks very much like a library. Attractive bookshelves are to be found in every part of the wall space that is not devoted to bulletin boards or chalk boards or some other necessary equipment. Ranged near these bookshelves are tables at which youngsters may sit to browse or select books to read. All types of books are included in our collection; they cover many different reading levels. Some are fiction, biography, or poetry. Others are in social studies, science, and health. There is also a large collection of reference materials: encyclopedias, dictionaries, almanacs, and so on.

In our individual reading a child chooses a book which he wishes to read. After he reads a part or all of it he meets for an informal book chat with the teacher. (He may come to discuss the book at any time.) He usually wants to discuss the characters he liked, the action of the story. Many times he discusses the ways the author expressed different

thoughts and reads examples. Sometimes other children sit in on these book chats. Some children like to dramatize for the rest of the class parts of a book which they have read. During these book chats I get a great deal of insight into a youngster's character and tastes and often suggest other reading he might like. I keep individual record cards on each child's reading—both as to quantity of reading and the quality of his insight into what he has read.

7. *Fairy-story Corner.* I had noticed for the last few years that the children were passing over the lovely make-believe stories for the true-to-life variety that is now flooding the market. While there is definitely a place for these latter books, I do not like to see the imaginative classics that are a part of our world background and culture being completely passed by. Who knows how long the matter-of-fact authors will last? Time has proved the value of Grimm and Andersen.

So a bookshelf was set aside for fairy tales. The nucleus was twenty books procured from the town library. This was augmented by books from school and home libraries. We made a castle of boxes and heavy construction paper. This was placed in the corner. Flanking it were the bookshelves containing the fairy stories, and in front of it was a comfortable reading table. It became one of the favorite spots of our room for children to browse and read during spare time. So that children would distinguish clearly between the worlds of fact and fancy we mounted a label above the castle reading: "When you come here leave facts behind—bring only your imagination."

8. *Pioneer Room.* When our school was built, part of the basement space was designed as a place where elementary-school children could come and relive some of the experiences of their great-grandparents. Their understanding of the differences between "then" and "now" would thereby be much greater, and such a setting would provide a realism in which much of their social studies work might function. The room is a duplicate of a typical 1840 pioneer home finished with rough-hewn planks. It contains a large fireplace with a Dutch oven. Furnishings include a trundle bed and a hutch table. Old-style cooking utensils line the fireplace, and old-style lanterns hang from the beams.

In preparation for a visit to this place a study of pioneer life includes stories and slides and movies. At times small groups come in turns to

spend a day with a special teacher who is full of early American lore. At this time the children dress in pioneer-style clothes. They cut wood for the fireplace, carry water with a wooden yoke and wooden pails, prepare lamb stew and put it over the fire in a black pot on a crane, bake corn bread in the Dutch oven, clean and dust the room, and learn to card wool.

Upper-elementary children come to the room to study colonial furniture, utensils, and ways of living. For this purpose there are spinning and weaving equipment, garden and carpenter tools, candle- and soap-making equipment.

9. *Dramatizing a Subject.* When we took up our study of the Vikings we decided to do it by pretending, as far as possible, that we were Vikings. We decorated our room to look like a Viking hall. This required a great amount of research among descriptions and pictures. We made objects the Vikings used—shields, boat models, etc.—and then devised stories to go along with them. This necessitated much reading of story-books containing material on the Vikings. We translated our names to correspond with Viking names. We found that some of our names—like John and Karl—had Norse equivalents. We found that other of our names—like Theodore and Estelle—had to be really translated. That is, we had to find out what the name means (as Theodore means “gift of God”) and then use some Norse equivalent of the meaning. We grouped ourselves in families and each head of a family chose an occupation characteristic of the Vikings. This required still more reading and investigation. The atmosphere established really made the subject live for the children, and it was a most interesting three weeks. (Of course we took time out of our Viking lives for certain other studies—like arithmetic—that had to go on.)

#### LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

10. *Appreciation Hour.* The last period of each day is an appreciation period. Music, literature, art, drama, and poetry are investigated in combination—whatever draws interest, wherever interest lies. Good music is played, sometimes with, sometimes without, explanation, which is always brief. Children are free to respond to the music in any way they like—imitating what the music seems to suggest, responding rhythmically, or

explaining what it meant to them after it is over. Children or teacher may tell or read stories during this period, or a group may dramatize a story they have discovered and prepared for this occasion. Original compositions are read. Sometimes prints of pictures are presented—by teacher or pupils—and discussed or simply looked at. Since this is a regular feature of the day, pupils are continually searching for material to present, and there is never a dearth of music, pictures, stories, dramatic interpretations, or original compositions.

11. *Children's Museum.* Our museum, which occupies an unused classroom, contains exhibits that are continually rotating and that usually reflect some subject being studied in the school. Sometimes classes use the museum to exhibit collections they have made in the course of a study, or the objects they have produced in shop or art room. At other times teachers use the museum to stimulate pupil interest in a subject about to be studied. The Japanese exhibit (collected from townspeople) was one of the latter and was especially interesting. It contained chopsticks, tea cups, silk pajamas, a kimono, a Japanese picture scroll, a sleeping mat, clippings and other pictures of Japanese scenes, and Mount Fujiyama in clay. The exhibit came first as a motivational device. The study of Japan followed and grew out of the multitude of questions the children raised during the course of preparing, setting up, and viewing the exhibit.

12. *Bulletin-board Newspaper.* For a number of years our six-grade elementary school had a school newspaper. But producing it in quantity with the facilities at our disposal became such a chore that we gave it up. Then the principal one day secured a large easel and placed upon it a piece of bulletin-board material about three feet wide by five feet long and invited each class to take turns supplying copy for this "bulletin-board newspaper." The school owns a piece of equipment that prints from rubber type in large letters about an inch high. Stories are first written by children and then given to the printer and his assistants who reproduce the stories (each with a headline and sometimes a subhead) on strips of newsprint a foot wide. This makes a bulletin-board newspaper five columns wide, and it is mounted in the widest part of the corridor downstairs near the main entrance. Since a story may be taken

down and a new one added as soon as any news occurs, it attracts considerable attention from both pupils and visitors.

13. *Display in Corridors.* In our corridors we have a simple means of displaying much pupil work. Long strips of bulletin-board material about two feet wide are placed horizontally along the wall and fastened to the wall by brads. Material may then be thumbtacked to the strips. Each class has charge of the strip adjacent to its door and may keep it as long as its display is changed frequently. Drawings, paintings, samples of pupil work, clippings which illustrate interesting topics, and so on, are pinned to these bulletin boards.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

14. *Discussion Problems.* To help students develop ease and facility in discussion, three or four questions are selected early in the week in my sixth-grade class. The questions are selected from "nominations" made during the preceding week. A question is nominated by the simple expedient of writing it on the board in a place set aside for the purpose. Any person—pupil or teacher—may write a question. Early in the week the three or four most interesting or challenging ones are selected from the "nominees" by the class. Usually more than one volunteer is available to lead discussion on each question, so one has to be chosen from those who want the honor. During the week this person plans his discussion of this question and at the end of the week we hold the discussions. These resemble the radio program, "Town Meeting of the Air." In fact the attention of the children has been called to this program as a model for our discussions, and now many of them are regular listeners. Many parents report that once or twice a week the dinner hour at home is given over to discussion of one of the questions which will be taken up in class.

15. *Vacation Trophies.* Because many of the children in our school go away during the summer, I like to organize the first unit of our social studies around the trophies which they bring back. This generates interest in a study of various parts of the country and makes it fairly easy to swing into an investigation of our geography. First I ask them to bring

to school whatever they brought back from their vacations. When this material is assembled we arrange a display on a bulletin board and a large table under it at the front of the room. There are rock collections, picture post cards, shells, Indian goods, and many other kinds of things. A large map of the United States is fixed central to the display and from the various objects a string of yarn leads to a point on the map from which each object came. From time to time and for several days I have the class discuss the collection, have children tell about their experiences on their vacation, and—most important of all—give members of the class the opportunity to raise questions about the country traveled over. Many questions the travelers cannot answer. These are recorded on a board at the side of the room. Soon the interest of the class in some of these questions becomes so great that it is an easy step to consulting books and other references. The unit begins to develop under its own power.

16. *Musical Setting.* Our music teacher does not rely on ears alone to get and keep children interested in music. The music room is always an interesting place in which to be and to browse. A picture of Brahms on the "music board" accompanies a short sketch of that composer. In another location a picture of Stephen Foster accompanies colored illustrations of "My Old Kentucky Home." Across the front bulletin board are words used in music with illustrations: the word "bar," and above it a blown-up example of the bar in music; "measure," also shown in blown-up illustration; similarly, "clef," "scale," "staff," etc. Most of these interest-stimulating exhibits are changed frequently.

17. *Washroom Signs.* The lavatory is probably one of the least educational spots in most schools. But there is no reason why its wall space should go to waste educationally. It is the place where many of the teachings of our health classes are put (or not put) into practice by the children. But it's hard to carry a maxim or a principle into practice without some reminder. For that reason we take advantage of the wall space in our elementary-school washrooms for signs and placards pertaining to washing the hands, regularity, leaving toilets clean, and other health habits. The displays are often prepared by classes studying health and are frequently changed by a crew of boys supervised by the janitor or a crew of girls supervised by a teacher.

18. *Poetry Broadsides.* Using some of the good poetry that has been written for children, I have taken eighteen- by twenty-four-inch white paper and have made a collection of broadsides. These are suitably decorated or illustrated in color. Each week I have a new poetry broadside up on a movable easel in the front of the room. Through this practice I have drawn many children to develop an appreciation for poetry. They become familiar with some of the poets, and some pupils develop a hobby of collecting poems they have enjoyed. One of the things that makes genuine poetry reading different from other kinds of reading is the desire to reread favorite poems frequently. The first year that I used poetry broadsides, three children of the class began writing poems spontaneously on their own—most of them surprisingly good ones.

19. *Invitation to Learning.* I have found that children have to be invited often to learn many of the important facts in any study. Interesting displays are useful for this purpose—as in our unit on helpful and harmful animals, for example.

I post a picture of a bat and beneath it the caption: "He flies by radar. He hibernates and migrates. Is he a friend of ours?" And on the shelf below the bulletin board I open a copy of a magazine to an article on bats.

Or I post a picture of a spider in the same way with the caption: "She is engineer as well as parachute jumper. Mrs. Spider spins silk. Is she friend or foe?" And on the shelf I place a pamphlet on spiders.

Or I put up a picture of a snake with the caption: "He has eyes but no eyelids. He changes his skin as you change your sweater. Does he help us or harm us?" And below there is a picture magazine open to a spread on snakes.

If such displays are put up and not left too long, they will induce children to read the book, article, or pamphlet to which they refer. Even after they are taken down and replaced by something new, the material to which they called attention remains in circulation for some time.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

20. *Attracting Readers.* Attractive, brightly covered reading lists are the latest innovation in our junior-high-school library. They are specially prepared to catch adolescent reading interests and are displayed promi-

nently on a table in the center of the library. We have lists of stories for girls, for boys, about dogs, sports, adventure, houses, travel, and the sea, mystery stories and career books and biographies. Each list is mounted on colored paper and an oak tag to make it strong enough to take wear. We bind them then into colored covers with the subject lettered prominently on the outside, together with a catchy illustration. Once a list is too worn or soiled, we copy it over and make a fresh booklet. Carbon copies are kept in case one of the lists gets lost. They are prepared by our librarian with the help of the members of the Library Committee and the student "Library Helpers." The card catalogue, the book-jacket collection, descriptions of books on library evaluation lists, and a knowledge of the children help determine which books are put on the list. The children make good use of the lists when selecting recreational reading.

21. *Advertising Study.* I attempted to make the study of advertising a real and interesting problem to my seventh-grade English class by using this activity: "What articles do you have at home that you would like to exchange?" I asked. Upon investigation each child found that he had something that he would like to get rid of in exchange for something else. "All right," I said, "write an ad about it." They looked through newspapers and magazines for suitable models to use for their advertisements. Then each wrote his own advertisement. Some of them were read out like radio advertising; others were "layouts" on cardboard. No article was shown. A number of exchanges were consummated on the basis of the advertisements alone. Some of the traders were satisfied; others were disappointed. We then went back to the original advertisement and analyzed it in each case to try to find out what had made the person buy, whether articles had been misrepresented, or whether the buyer had not exercised sufficient judgment. This process stirred up a lot of interest, and it was an easy step into a study of the field of advertising as it relates to mass merchandising.

#### JUNIOR AND SENIOR HIGH SCHOOL

22. *Character Study.* My eighth-grade pupils at the beginning of the year discussed the phases of health which they thought they should study (in addition to topics which I chose for them). Among them was a study of character building and personality development that they considered

most appropriate for them to undertake. "How to develop a more attractive personality" was the general aim of the unit. Good grooming, health, sense of humor, honesty, tolerance, and respect for others were factors which were considered important in contributing toward this aim and were studied in turn. An attendance chart was kept to show the relation between health and attendance. Reasons for absence as well as preventive measures were discussed.

Boys wrote sketches of the type of girl they thought was ideal. The girls did the same about the ideal boy. These were kept anonymous, read aloud with much laughter, but certain useful generalizations emerged from the experience. Traits mentioned were tabulated on the board in the order of their frequency.

The school psychologist talked about these traits, about formation of personality in general, and about habits and habit-formation.

**23. Formula for Critical Analysis.** To develop critical thinking among my pupils, I have tried to teach them to assume a questioning attitude toward what they hear and what they see written rather than to accept everything thoughtlessly or apathetically. I urge this particularly with regard to current issues and affairs. In consequence the students have come to examine a speech, article, or book somewhat as follows: "Upon what does the speaker or writer base his assertion?" "What proof or evidence does he show to substantiate what he has said?" "Where did he obtain this evidence?" "Is he himself qualified to speak or write authoritatively on this subject?" "What purpose is he trying to achieve by what he says?"

Frequently in the study of newspaper articles and other printed materials students present to the class what they have discovered by asking questions of this sort about material which they have read. For example a student may have found two articles presenting views pro and con a subject like labor, or tax reduction, or socialized medicine. His analysis is very revealing when he tells who a writer is or what side of the issue he represents and then quotes characteristic statements from his article, contrasting them with statements from the opposing article.

**24. Composition Problems.** To stimulate the imagination of one of my English groups which was markedly lacking in originality I successfully used several procedures: (a) I put pictures which would stimulate the

imagination on the bulletin board. These were mood pictures, pictures of odd shapes taken from odd angles. I used both photographs and paintings. I left them for a while and after a few days asked pupils to tell stories about any one which they chose. Then I asked the class to write stories, each pupil using the picture of his choice. (b) I read short stories—particularly those with a stimulating or thrilling climax. I read these orally to the class up to a critical point in the story and asked the members of the class to write their own endings. (c) I gave the students a short paragraph of two or three sentences and asked them to supply the concluding sentences.

25. *Pupil Questions on Timely Issues.* Near the time that Princess Elizabeth of England became twenty-one, there were many articles in newspapers and magazines concerning her life, training, and heritage. Several boys and girls in my social studies class brought these articles and accompanying pictures. We posted them on a bulletin board. As the amount of material on the subject grew, questions such as these were asked: "How can a girl or a woman ever rule England?" "Will Elizabeth have much power when she becomes queen?" "If the King of England has so little power, why do the English keep him?"

As these questions were raised we set aside a place on the board where any pupil might write down any such question that the material suggested to him. At the conclusion of the unit which had previously been in progress we spent several class meetings discussing these questions. We organized them and rephrased some of them and from them developed a unit on Anglo-American government and institutions.

26. *Student Forums.* Enrollment in the Forum Club is entirely voluntary. It is open to all pupils interested in discussing problems of current interest and in public speaking. The club selects its forum topics after a questionnaire canvass of the student body to find out what topics they are interested in. Each forum is preceded by a poster campaign, a display in the corridors, and a homeroom guidance lesson built around the topic for discussion. Members of the Forum Club aid in conducting the guidance lessons for the various classroom groups the day before the forum assembly. A large number of adults also attend forums when the topic is one of interest to them.

The first forum this year dealt with the subject of the new proposed

constitution for our state. The forum was held the week prior to the election. Leading the discussion were a panel of six students and a local judge who had been a delegate to the constitutional convention.

Another forum dealt with better human relations. A social worker, a priest, a colored minister, and a colored doctor participated with the student panel. A forum was also held on the problems of juvenile delinquency and a local judge of the juvenile court was a guest speaker with a panel of five students. Other topics include internal school problems such as "Behavior in the Cafeteria," "The School Service League and Its Relationship to the Student Body," "Our Pupils and Their School's Reputation in the Community," "Better Citizenship Training as Reflected in Our Schools."

These forums have much of the flavor of a New England town meeting. An important feature is that all come to the forum as intelligently informed citizens prepared to participate actively in the discussions.

**27. Radio Homework.** Regular homework assignments in our high-school social-studies class involve listening to radio programs such as "Town Meeting of the Air," "Information Please," and a large number of other educational programs which come on the air in the evenings or at times when school is not in session. Particularly important programs are recorded on wire and played back as needed in the classroom. Committees of pupils are responsible for various phases of this radio-listening program. A general committee makes listening assignments, and other committees monitor specific programs. Some programs are required listening for the whole class. Any committee may secure the services of the recording committee if it considers its program may be of sufficient importance to play back later in its class report. Additional material from newspapers and magazines may be used to supplement study of a problem discussed on the air.

**28. Intergroup Relations.** I remember an especially fruitful way in which I set the stage for a study of intergroup relations. It was at the time that Paul Robeson was appearing in *Othello*. I secured some photographs from the play, a clipping of a newspaper interview with Robeson, and clippings from other newspapers and magazines dealing with the subject of intergroup relations. I mounted these attractively on cardboard with headlines and other devices to call attention to the material. Some

I put on the bulletin board. When I noticed the bulletin-board mountings drawing a lot of attention from members of the class, I asked them what they thought of the material. Some of them made remarks about its being an interesting display. Others mentioned incidents and pointed out that the subject was an important one. Then I passed out the materials I had mounted on cardboard. There was a long period of silence and attentive study of the material. The silence was broken by a question. Soon there were other questions and we were in the middle of an interesting discussion of the subject. Before the discussion closed we had launched a unit. I have noticed that such an approach to a discussion will invariably start mental activity that would perhaps be entirely inhibited by introductory remarks from a teacher—especially on this topic.

#### SENIOR HIGH SCHOOL

29. *Problems of Democracy.* My class in problems of democracy works without textbooks and without any hard and fast outline or course of study. I am particularly concerned that it be a "problems" course. The first day or so we spend in visiting and getting acquainted. Each pupil tells a little about himself and a part of the day is given over to conversation in small groups so that students may become so thoroughly acquainted with one another that they will not be afraid to address one another during a discussion.

Our first problem is to define democracy. We secure a number of suggestions from members of the class. Students supplement these suggestions with various pieces of material gleaned from pamphlets and books. We then finally refine our class definition of democracy.

As a next step I point out that we are going to undertake some problems and that a problem is undertaken only with the presumption that it will be or can be solved. We need to know something about problem-solving so we spend several days in discussing the scientific method of solving problems.

We are not yet ready, however, to start considering problems, for the pupils lack background. To get a picture of the changing scene in America, pupils interview old-timers to find out what things were like years ago; they examine files of old newspapers, old books, etc. Movies are used to illustrate the developments of industry, transportation, and living conditions during the past century and a half. After activities of this sort

pupils have sufficient background to be sensitive to a number of problems which need study. At this point we proceed to discuss and list problems dealing with home, school, community, nation, or world. Usually a list is compiled of sixty or seventy good ones from which we choose first the most critical ones for detailed study. The class is organized into groups of five or six pupils, each working on a problem.

30. *English Class Studies Social Problem.* My senior-high-school English class got into a discussion of crime prevention. This was a college-going class and I could see that this subject held a great deal of interest for them. Although debating was not a subject which I had planned to cover at that time, I modified my plans and suggested to them that we organize a debate on crime prevention. We made a preliminary study of debating and then set to work on preparing a debate in which each member of the class would give his viewpoints. The best ones would be selected by vote to debate the subject before a high-school assembly. During the course of the preparation of the debate we brought in authorities to talk to us on the subject—lawyers, policemen, a psychiatrist, and so on. We made visits also to a prison located nearby, to the juvenile court of our city, and to a reformatory farm. I pointed out that there was much on crime in literature—that many short stories, novels, and dramas investigated the problem of evil (not to mention the popular “whodunit”). We read many such pieces, among them De Maupassant’s “Piece of String” and Chekov’s “The Bet.” We used an interesting technique with the latter. We read it orally in class—almost to the end but stopped before the class could be sure what happened to the prisoner. Then they played amateur psychologist in a very interesting discussion. Each student chose one aspect of the subject on which to write a term paper. The paper occasioned a great deal of independent reading, some of it in the fields of criminology and psychology.

31. *En Français—en Español.* Our modern-language bulletin boards, both inside classrooms and in the corridor outside, are used continually for displays intended to acquaint students with new vocabulary and new concepts in foreign languages. The displays are changed every week or two and reflect interests of the moment. At Halloween, for example, the bulletins were posted with goblins, broomriders, bats, cats, and other symbols of witchery. On the French display (labeled at the top *En*

*Français*) was the word for Halloween—*La Toussaint*—and pictures of an owl (*hibou*), bat (*chauve-souris*), cat (*chat*), witch on a broom (*sorcière*), etc. On the Spanish display (labeled at top *En Español*) the similar designations were *Vispera de los Santos*, *lechuza*, *murcielago*, *gato*, *bruja*, etc. Our class conversation then introduced these new words, and our discussion on Halloween in France and Spain was based on the displays. Similarly displays intended to stimulate the curiosity and imagination of the students were used for other holidays, seasons, events of the week, and so on.

32. *Identifying Biological Specimens.* During the first three weeks of school I encourage pupils to bring to my biology class any biological specimens they can find—living, dead, or preserved. They bring in leaves, peculiar plants which they have dug up in the fields, various species of toad and frog, and many other specimens. We have arranged in the room a display case in which we place the two or three specimens that come in each day. Over the display case a placard reads: "What Is It?"

Students are given time to examine the objects closely and to try to identify them by whatever means they can. They use the biology text, various reference books which are available, a classification chart which is posted in the room, or any other resource they can get. Great interest and great effort are expended in trying to solve the problem of classification.

If individuals are not able to make the identification within a reasonable length of time we take up the problem as a class exercise. We list every important characteristic of the specimen. Then we thumb through the biology text (or other regular reference materia, available to the class) looking for passages which discuss these characteristics.

I find that students are much more interested in this approach to biological classification, that is, in attempting to solve a practical problem of identification as an introduction to classification, rather than having to learn a cut-and-dried system of classification first. This activity also gets them thoroughly familiar with their text and other references before I begin to assign material.



## Practice 2: INDIVIDUAL ADJUSTMENT PROCEDURES

*Modifying the Conditions of Teaching to Help  
Individuals Adjust More Successfully to Them-  
selves and Others, and to School, Classroom,  
and Society*

*Use This Practice to . . .*

- b.* Uncover and develop many different kinds of special talents in individual pupils.
- d.* Develop desirable character and personality in pupils.
- e.* Develop good citizenship.

THE "problem child" is always with us. Often we fail to recognize the pupil with the most critical problems. Problem children are not limited to those who annoy us. Individual diagnosis is necessary to help us discover all types of cases. But it is one thing to diagnose, another to remedy and cure. A pupil is never a problem child unless he is unadjusted in terms of emotion, feeling, desire, strong urges and needs—to himself, to others, or to both. Sympathy, understanding, and a great knowledge of people are requisites for the teacher who would help individuals adjust and thus overcome their problems. Next is ingenuity and flexibility in the management of a class. On the spur of the moment the teacher must be ready and able to make changes, to design new approaches to classroom work, to seize upon events as they occur and make the most of them in helping an individual overcome his problems of adjustment, to build strong personal relationships between pupil and teacher and between one pupil

and another, to take great amounts of time for individual counseling and for planning classroom activities in terms of individuals.

*Guidance is the field which has specialized in problems of individual adjustment.* But guidance specialists and guidance directors will never solve all the problems. Some of their specialized techniques require advanced training. Fortunate is the average teacher who can rely upon the services of a guidance specialist for some of the most acute problems.

But all teachers must look upon classes not as masses of pupils but as individuals; they must observe individuals, plan for them, and modify classroom procedures to take account of their differences. Otherwise guidance in name will never become guidance in fact, for the guidance specialist will never get to know about most of those who need help—his time will be spread too thin.

*Counseling is one of the primary tools of guidance.* Viewed administratively, counseling is teaching with a class of one. All good teachers group the pupils in their classes—from groups of three or four to groups of ten or twelve—for different purposes. Some of the very best teachers work with their pupils in groups of one—viewing each individual as in a class by himself—for some purposes. Then a teacher's power is enormously enhanced if he has had some training in specialized counseling techniques.

The primary tool of the teacher who uses Individual Adjustment Procedures in a group of pupils is constant watching—observing individuals and what they do, asking himself why they do what they do, seeking the cause the action is a symptom of, devising a plan which might help remove the cause. The solution of many problems of individual self-discipline seems to hinge on discovering some hidden talent or need of the pupil and then finding some activity which will occupy this talent or need. Many cases cited by teachers seem to say: When you have a difficult behavior case (aggressiveness, shyness, not working up to capacity, etc.) *keep seeking for the key in the pupil himself. This key is either an ability or a desire to do something well.*

Many times pupils do not do their best work because of physical difficulties. Unless the school has an elaborate system of physical testing, only the alertness of an observant teacher can discover that a physical difficulty exists. There are many cases cited by teachers of shyness, poor work, "laziness," and tenseness where the basic cause is physical. These cases seem to ask: That youngster who is not doing so well—is it because

*of a lack of ability or because something will not let his ability function?  
Keep on the lookout for symptoms.*

### SAMPLE PRACTICES

The practices given below are classified under the following headings:

1. All Age Groups
2. Lower Grades
3. Middle Grades and Junior High School
4. Junior and Senior High School

#### ALL AGE GROUPS

1. *Eye Trouble.* During the reading lesson a boy was leaning his head against his hand, covering one of his eyes. I said to him, "If you cover one eye you will strain the other." He said, "If I don't cover the other eye I see double." He wore glasses some of the time and when I asked him why he didn't wear them all the time he said that they kept sliding down on his nose and giving him a headache. We got his glasses and went to the nurse. She examined him and adjusted the glasses. She told him to come back every week to have his glasses adjusted. From then on his eye strain was eased and his reading improved.

2. *Ear Trouble.* I have a little girl who at the beginning of the year seemed very tense. She watched me like a hawk and seemed to hang on every word. In going over her record I discovered that she was very hard of hearing—that she could hear almost none of normal conversation. I try to stimulate a spirit of helpfulness among the other children and at the same time not make her conscious of her difficulty. We manage this quite well. I always stand near her as much as possible so that I can make sure that she hears and understands. Just of late she seems to be relaxing and her work has been improving. I am frequently able to tell her truthfully what a good job she is doing. I feel that my most important task is to keep up her feeling of assurance.

3. *Ear Survey.* We give annual audiometer tests in our school system. Many students with defective hearing have been located and helped. There are many reliable signs that are symptomatic of poor hearing—discharging ears, earache, noises in the head, facial expression, requests for

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. Individuals differ in all sorts of ways. It is easy to see that some people are taller than others. It is less obvious that people differ also in feelings, desires, urges, and needs. What is pleasing to one is not necessarily pleasing to another. One man's meat is another's poison. To be thoroughly successful a teacher needs to be sensitive to every pupil: What is he thinking? What does he want?

2. Security and success are the soil and climate for growth. No one can learn when he doesn't belong—any more than a plant can grow without roots in the soil. No one can succeed on failure—any more than a plant can grow without water and sunlight. The teacher must keep thinking of the needs and desires of specific pupils and keep patterning his practices to fit.

3. All learning occurs through attempts to satisfy needs. A need is like a gnawing in the stomach—sometimes sharp, sometimes dull. What people do, consciously or not, they do because of need. Then they learn what to do to satisfy need. What students do, whether good or bad, depends upon how the teacher plans it—or fails to plan.

4. Emotional tension decreases efficiency in learning. Before the skills and facts of teaching come friendliness, security, acceptance, belief in success. Without these, tensions are produced.

5. Physical defects lower efficiency in learning. A sound mind in a sound body is the way we have said it for ages. This means that for greatest efficiency in any kind of teaching, physical health comes before mental vigor.

### SOCIETY SAYS:

6. We should help those who have handicaps. The good society is not a jungle. If it were we would trample down those who were in any way unfit. "Inasmuch as ye did it unto the least of these" . . . is a better guide for schools. We start with the premise that everyone has good in him and we do everything we can to give the good a chance.

7. The greatest good for society is the greatest good for its individuals. The total effectiveness of any society is the average efficiency of its individuals. The smallest increase in an individual's competence is a contribution to the whole of society.

## SAMPLE PRACTICES (Continued)

repetition of words, pointing one ear in the direction of the speaker, unusual mistakes in diction, peculiar qualities of the voice, listlessness, and inattention.

When there is doubt as to the hearing of a student a retest is given. The school nurse does the follow-up work. She visits the parents and sees that the children are taken for clinical work. A large percentage of cases of impaired hearing, if discovered early enough, can be cured. Through some of the service clubs we have arranged to secure hearing aids for children who cannot be helped in any other way.

4. *Foreigners.* Hereafter I will always welcome any child to our class who comes from a land unknown to us. Such children have had many experiences which we have not had and they can be useful in our teaching if we are clever enough to sense how.

The first time Monika stood up to speak in class—a stranger from a distant land—she began to recite a little nursery rhyme in broken English. The children were amused, as I could see from the smirks on their faces. When Monika had finished I asked her if she knew any German nursery songs. She nodded her head and proceeded to sing. Her sweet, bell-like voice found the hearts of her classmates and soon their expressions of ridicule changed to expressions of admiration.

Our little German classmate became our most popular songstress and so our class took one important step forward in the art of living together.

## LOWER GRADES

5. *Draw and Relax.* John was transferred into my second grade from another school during the year. In a very short time he began to display signs of emotional instability—temper tantrums, physical violence toward teacher and classmates, unwillingness to cooperate, scoffing at children interested in working, etc. I talked to him from time to time—in not too concerned a fashion, but as any adult would talk to another, and I discovered that he knew a few school and college songs. I invited him to sing some of these for the class and to teach the songs to the class. This was the beginning. We turned some of these songs into rhythms; I gave him opportunities to do creative drawing (about subjects that interested

him); I gave him certain classroom responsibilities and duties. Gradually he became more stable.

**6. *Inept Learner.*** When Paul, aged nine, came into my class he told me he was "dumb" and couldn't learn—so of course he wasn't trying. Desperately I searched for something he could do and found that he could draw. I began sending children to him for help in drawing legs, ears, and various shapes which they could not do well. Paul's prestige with the group began to rise. He began to be happier in school. His home conditions were bad so we had no help. One day he began to sing. I discovered he sang choruses with simple words he could learn, so on a program we had him sing a simple Easter song with a "pal" who had a good singing voice. Because he began to be happier we could begin to teach him and to develop his study habits. He learns slowly and we must apply special education helps much of the time. However he is progressing fast enough so that he, himself, is pleased and really tries to learn. He will go into fourth grade next year. He will still need special help, but he is becoming a better citizen. He has developed a certain amount of self-confidence because others look to him for help.

**7. *Ten O'Clock Scholar.*** A certain child was always late in my class. One day he said he had a very interesting story that he wanted to tell the children about something we were studying. Instead of letting him tell it then (for we had something else afoot) I suggested to the children that we arrange our plans so that he could tell it the first thing the following morning. I expected that he might be late, but I wanted to see, and sure enough there he was on time. It was interest and the feeling of responsibility that carried him through. I now try to arrange for him to have various little responsibilities to undertake the first thing every morning.

**8. *The Best Policy.*** We put some time on cultivating honesty. It takes a little while, but every little bit helps. Honesty grows best when a teacher is able to make something out of a lifelike experience or situation.

For example Grace found a penny in the classroom and said nothing about it. The next day Sandra asked if anyone had found a penny. Some one said that Grace had found one. Grace then said that she had, but she

had spent it. We talked about this a little, and one child said he didn't think it was right for somebody to find a penny among friends and spend it without asking whether some friend had lost it. I asked what a person ought to do under the circumstances. After talking it over it was finally decided that Grace ought to bring a penny to school for Sandra, to replace the one that was lost. Grace said she would do so and did the next day. Then we read a story about Abraham Lincoln and a penny which illustrates the point.

If a child runs out of paper he is free to borrow, but he must pay back. Each child keeps a record of the paper he has loaned or borrowed. Then the child borrowing the paper pays back from his new tablet the number of sheets he has borrowed.

These and many other little incidents help. The main difficulty is to remember that these incidents are sometimes as important as the more formal aspects of school life.

9. *Generosity Exercise.* School life is full of opportunities for setting up situations in which various character traits can be practiced. Take generosity, for example. I had a group of children who were very selfish. I asked them how they would like to hold a Valentine party (it was that season of the year, but a similar excuse for a party could be found at any season). Toward the close of the party I said I had a surprise—a gift for each boy. But each boy was to choose a girl as his partner, and he must share his surprise equally with her. Then I produced a box of little bundles neatly wrapped. They contained candy. But each bundle contained five pieces—an uneven number. So each boy had the problem of deciding what to do. Then we held a little conference. Each talked about how he solved his problem, and others suggested what they thought should have been done when the solution was not generous. In our discussion the children finally agreed upon principles of being polite, generous, and unselfish toward one another.

10. *Visiting Kindergarten.* In the spring all the children who are to enter kindergarten in the fall come to school to be registered. They come to the kindergarten room and meet the kindergarten teacher. She shows them the room and then, after she feels that each child is at ease, invites him to come and visit some time in the next few months. Very rarely does a child fail to avail himself of the invitation. The plan has worked out

very well. In the fall when the children come they know the teacher and the room and feel very much at home.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

11. *Grade Classification.* In September Harry entered our fifth grade from another school. He was twelve and a half years old. His attitude was defiant; he was impudent and troublesome. After testing and consultation with the psychologist and principal, we decided to put him in the sixth grade where he would be with children of his own size. We did this despite the fact that he was able to do work on only the fourth-grade level. But some of the sixth-graders were able to work beyond the sixth grade level, and some of them were not up to that level. There was already quite a range of ability in the group. It merely meant that the teacher would have to work individually with Harry as she was already doing with most of the grade. In the sixth grade he proceeded at his own speed; he was helped and coached by some of the brighter boys. He felt that he was working to catch up with the others, and this provided him with an incentive. He was good in athletics, so he was accepted by the other boys as an equal. He thrived under praise and approval and developed very good manners and a cooperative attitude.

12. *Gripe Session.* The children of my group were mostly from an underprivileged class and of limited mentality. They were somewhat big and overgrown for their age. Whether these circumstances had any bearing on their quarrelsomeness I do not know. However I tried several ways to improve their group morale and finally hit upon what was the most successful plan of all: an informal fifteen to twenty minutes the first thing every morning during which time anybody is allowed to air his feelings. Whether it is an argument to be settled or a disturbance at home, each child can "get it off his chest."

At first this period was nothing but a "gripe session" with complaints of one against another. But sometimes sympathy was expressed for somebody who was in a difficult position (for anyone is allowed to comment upon anyone's "gripe"—not only the principals involved). Soon the children began to realize how petty most of their arguments and disagreements were when put into words. Then their talk took on a more grown-up

style and suggestions began to arise for improving general behavior, for the good of the group.

Now each child knows he will be given the same attention and that his problem will be given the same careful hearing as anyone else's. Of late, former so-called "enemies" have even ventured a word of commendation for each other, and the group as a whole is working in fine unison. The bickering back and forth has stopped to a great degree, and there seems to be a lessening of nervous tension generally. The process has taken time, but I feel it has been time well used. During all these sessions I have never attempted to force matters or point a moral, nor have I given any impression of haste or undue shock or motherly concern.

13. *Class Cartoonist.* Fred, in the sixth grade, was emotionally unstable, showed little interest in schoolwork, and because he was a poor reader was especially antagonistic to a unit we were doing in history. I discovered one day that he could draw—quite well and with a strong sense of humor. I secured some drawing materials for him and asked him to make a special contribution to our study of the history unit by drawing cartoons and caricatures of the personalities that we studied in our history unit. If he needed descriptions other children would tell him what he needed to know. His special contribution then, from time to time, was to present a cartoon bearing upon what we were studying that day. These were placed on the bulletin board and were outstanding artistically. This boy has improved in so many ways that the plan can be marked as thoroughly satisfactory.

14. *Sign Painter.* A fourteen-year-old boy is the son of immigrant parents now separated. The mother has the two girls of the family with her; the father has the two boys. The father and the boys board with a family who work in a factory. The father is seldom home. The boy in question was wild and troublesome, hated school, but was not unintelligent. He scribbled on the boards and took delight in surreptitiously erasing from the board what was to be saved. I gave him some colored crayons and some poster paper and newsprint to scribble on in order to ease his craving for writing on the boards. I put him to work on making signs. I racked my brains for signs for him to make, but I kept him busy. He posted his own signs in the room, in the corridors, in the toilet, in the cafeteria, and on the playground. When places for signs were exhausted I gave him the

job of keeping the list of savings-stamp buyers. He is now much better behaved and is doing a better job of his schoolwork.

15. *Reporting in the Dark.* Mary in the seventh grade had a high I.Q. and a fine home background. Her father was a professional man and her mother well-educated. Mary had a very attractive younger brother whom everyone admired, but little attention was ever paid to Mary. When she entered the seventh grade she was a definite introvert—she would take no part in any activity and was shy and even cringed if asked a question.

One of the projects our group had afoot was the making of lantern slides illustrating various phases of the unit we were studying. In the darkened room Mary projected her slide and told about it briefly—reluctantly and timidly. She produced more slides from time to time and as she told about them there in the darkened room she gained a little confidence in herself. Then, as a next step, I asked her occasionally to hold a map or a book or a picture in front of the room for some one else who was telling about it. One day Mary volunteered for a short report on a subject in which she was interested. I praised her on her report. This was followed by other reports. During another unit the class divided into committees, each to present a dramatization of a phase of the unit. By this time Mary was willing to help plan the little play and seemed to enjoy taking part in it. By the close of the year she was right at home in the group, having won some degree of self-confidence and assurance.

16. *Personal Achievement.* An eighth-grade girl, mature for her age, capable, and anxious to be in the public eye, was extremely resentful of restraint of any kind, critical of most things, and especially resentful because she had not been in an assembly program all year. After a long conference with her I succeeded in getting her to realize that the responsibility of getting in a program was as much hers as anybody else's, that it was her school, and that there was a great deal which she could contribute to it.

I asked her if she would sponsor an assembly program of her own. In this she took interest. She took charge of a musical program and made arrangements with those students whom the music department recommended to her. She interviewed the members of the physical-education

department for suggestions on dances, directed the stage setup, and put on a program which was well received.

17. *Helping a Friend.* A bright girl with a good school record through the seventh grade progressively neglected her school responsibilities until she faced failure in the eighth grade. Dislike of schoolwork, disregard of home and school tasks, and interest in other activities beyond her age level resulted in periodic truancy of a serious nature. A leader, she took with her on truancies a girl of lesser ability.

Time after time I talked with her but failed to help her set higher goals for herself. Finally I showed her what was happening to her friend. The friend was now going to fail because she had been led into truancy. The bright girl, who had resisted all efforts up to this time, melted in the face of her friend's needs. She agreed not only to stick closer to her own work but to help her friend. She tutored the friend and in helping another she helped herself. She became a changed person with worthwhile aims. The truancies stopped and her own schoolwork improved enormously.

18. *Office Helper* I will cite this instance to show some of the values of a system of student administration. We have a rather thorough system wherein we use a large number of pupils in many different important situations to help to carry on the operation of the school. One of the most coveted of the student positions in our junior high is that of office helper. All children desire this honor, but the number of those who can be office helpers is necessarily limited.

Grace was in the eighth grade. She was bright but extremely unhappy because she felt she was looked down upon socially, since she came from what might be considered the "wrong side of the tracks." After a series of conferences with her the purpose of which was to build up her self-esteem, she was offered a position as office helper. She was immediately catapulted into a place of importance in the eyes of her classmates. This had a marked effect upon her general attitude and outlook.

Now she helps in the office one period each day. She greets students and adults who come in, answers the interschool telephone, distributes bulletins, and in many ways has made an important place for herself in the operation of the school.

## JUNIOR AND SENIOR HIGH SCHOOL

19. *Dramatic Therapy.* An only child, quite self-centered and given to negative responses, criticized everybody and everything. She became quite unpopular with students and teachers. Talking with her about her unhappy predicament changed nothing. Finally I urged her to join the dramatic club. I complimented her on her figure and bearing and said that I thought she should be able to play some parts quite well. Having a small part in a couple of plays forced her into the society of others and brought about a marked improvement.

20. *Seamstress.* Joan was doing very poorly in the commercial course. She was not getting from it what her pride and self-esteem demanded. She became interested in sewing, showed real talent in designing and remodeling, with the result that her personality changed from an extremely shy to a very pleasant and natural one.

21. *Helping a Pupil Get Help.* This case will indicate the type of guidance service which is supplied in our school when a pupil is referred to the counselor because of unsatisfactory schoolwork. The counselor talked to a boy who was doing poor work and discovered that several factors were contributing to this situation. The boy had had infantile paralysis six years before. Although he had made a remarkable recovery, he was still handicapped and was attempting to work beyond his strength. The counselor found out that the boy's aunt, with whom he lived, was away from home all day working. The boy himself had taken a job to supplement the family income. He worked from 3:30 in the afternoon until 10:00 at night. He had never heard of any agency for rehabilitation and was making valiant efforts to do the best he could. He had planned to console himself with any job he could get when he was graduated, although he had always liked the idea of becoming a mechanic.

After the interview the counselor made arrangements with the Infantile Paralysis Foundation and the State Rehabilitation Service to work out a plan of counseling and help. A schedule of physical checkups was arranged; subsidy was initiated to the extent that he can now devote his best efforts to his schoolwork and give up his attempts to earn money at the present time. Upon graduation he is now assured of expert vocational

employment help. All cases of persistent failure in our school are referred to the guidance counselor.

22. *Sub-deb Club.* Our sub-deb club is open to any high-school girl who wants to become a member—provided her attendance is regular. Two unexcused absences serve automatically to remove her name from the membership roll. Our aim is to cultivate charm, personality, and poise and to stimulate interest in dress and grooming. We make a considerable use of current style magazines, have discussions with the home-economics sewing teacher on dress design, and even have some of the “best-dressed” women of the community meet and talk with us. Other of our discussions are given over to questions on proper social behavior, boy-girl relationships, and etiquette.

23. *Local Tryout.* A senior girl wanted to be a commercial artist, but her family was not sympathetic toward her ambition. The girl came to the home-economics teacher for advice. What should she do—what could she do? The home-economics teacher discussed the problem with the principal and with the art teacher. The main problem, to them, was that no one seemed to know whether the girl had the talent and the personal qualifications to succeed as a commercial artist. It would have been unwise to counsel her against her family's judgment without some degree of certainty, unfair to discourage the girl simply on account of her family's prejudice. Some form of tryout experience seemed to be the only way to get an answer to the problem.

One of the teachers involved made an appointment and went to see the head of a local drug company who employs a full-time advertising artist. After discussing the matter with him a conference was arranged between him and the girl. It was finally decided that the girl would spend two hours daily in training with the commercial artist of the drug company—on school time but with no pay—so that she and those counseling her might more fully assess her fitness for a career as a commercial artist. During the process of the negotiations the parents consented to undertake this experiment.

24. *Helping with Looks.* One of the girls in our high school was very talented in science and had done outstanding work during her high-school years. She was interested in scholastic matters and cared little for

her personal appearance. The science teacher was helping her to prepare to take an examination for one of the scholarships offered on a national competitive basis by one of the large industrial firms in the country. He knew the applicants would be judged on all-round development—good grooming as well as good scholarship. He mentioned this fact to her in the course of their conferences. When he noticed that she responded with some embarrassment but with some interest, he decided to bring a copy of a magazine to their next conference—a magazine containing style suggestions for women. They took a little time looking over this. He suggested that she let him help her to select the dress she was to wear and eventually told her how to wear her hair. She accepted his suggestions, went to the examination, and won a national award.

**25. English for Auto Mechanics.** The class English for Auto Mechanics is made up of students taking the shop courses in auto mechanics. These boys, with a few exceptions, are not the type who would profit from attendance in the academic English classes. For that reason practically all material used is concerned with the basic knowledge necessary to understand the internal combustion engine. Since engines are the area of interest and the boys are from the tenth through the twelfth grades, no attempt is made to separate them into sophomore, junior, or senior groups. All contribute according to ability as they are trained step by step in what the automobile engine is, how it works, and why. Texts used are technical books and even supplementary readings are from books the content of which, though not solely on the automobile, has machinery of some sort as its chief interest. A working vocabulary of mechanical terms and improvement in the general use of language are stressed.

## Practice 3: PUPIL INTERESTS

### *Using the Present Interests of Pupils as an Indicator of Growth and as a Tool to Motivate New Growth*

#### *Use This Practice to . . .*

- a. Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b. Uncover and develop many different kinds of special talents in individual pupils.
- d. Develop desirable character and personality in pupils.
- f. Develop attitudes and habits of good health and safety.

INTEREST is a powerful force. A person will rise to almost any occasion if he has interest in it. Teaching which goes on without the interest of the pupils is not good teaching. Interest is not the major objective of good teaching, it is just the necessary by-product. Interest is a double-edged tool for the teacher. He uses interest in two ways:

*First, interest is an indicator of growth.* It is as though the teacher had a gauge in his hand—an interest gauge. Are the pupils interested in what they are doing in the classroom? Then the teaching is prospering—the pupils are growing, learning. What are they interested in? Do their interests match their age, their intelligence, their social maturity? If so they are growing as they should. If their interests are meager compared to what you would expect, then something has gone wrong in the teaching process—the pupils haven't grown as they should.

*Secondly, interest is a tool that can motivate new growth.* What topics, problems, and projects should the pupils be undertaking? One of the

quickest, most effective ways to launch pupils on the way to a new study is to find something about the study that touches upon an interest which they already have. The resourceful teacher keeps up on the things which his pupils are doing, the things they undertake on their own initiative, the things they are already interested in. He keeps up on these interests and keeps records of them. He is constantly asking himself: How can I align this new thing which I want them to study to the powerful stream of interest already motivating them?

There are many methods for analyzing interest—interests in people, interests in things. These include interest inventories, interest tests, autobiographies, free class discussion, observing objects brought to school, teacher-pupil talks, quality of performance in various school projects, out-of-school activities, sociometric techniques, psychological counseling, and many others. For some of these the most important resource is an observant teacher. Others require the specialized skills of psychologists and guidance counselors. But having discovered interest—the extent of it and in what fields it lies—it is the individual classroom teacher who must do something about it and for whom it is the greatest ally. The teacher who does nothing about interest is like a technologist who refuses to use a great source of motive power in his plant.

The use of interest is very common in the development of reading skills in the primary grades. The reading-readiness program is to a very great extent the building in children of a background of interests in relation to which reading as a skill can function. Interest is a successful ally in remedial-reading work. After discovering areas upon which an individual's interests touch, the remedial-reading teacher selects abundant reading materials in these areas at a level of difficulty suitable to the pupil's reading skill. The teaching of all skills by relating them to their use relies heavily upon pupil interest in the many projects and enterprises which are undertaken in the good school.

No pupil completely lacks interests. There is always some field of knowledge in which he is interested. His interest, whatever it is, is limited by his past experience. Every field of knowledge must be presented in terms of the past experience of the pupil if the learning is to be successful and lasting. This is one reason for the introduction of current topics into the curriculum, for bringing the great outdoors into the classroom, for teaching pupils about themselves—their persons and their personalities, for having them do in schools the things they like to do.

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. Interest is an indicator of growth. We don't teach to get interest, but if interest isn't present the teaching isn't prospering.

2. Interest is a source of power in motivating learning. When you are interested in a thing you are in it and feel a part of it; the battle is half won so far as learning more about it is concerned. This means that a teacher who doesn't hook his teaching to whatever pupils feel they are already a part of is not making the greatest use of the powers he has at his command.

3. What gives satisfaction tends to be repeated; what is annoying tends to be avoided. Teaching is more efficient if it touches upon those things which a pupil has already found give him satisfaction.

### SOCIETY SAYS:

4. We should try to draw out the full capacities of everyone. The greatest contributions have come from those who were consumed by interest in their work. The teacher who does not discover and foster interests is conspiring to stifle potential contributions to society.

5. We should teach people to do better those desirable things they are going to do anyway. This is Briggs's famous dictum. In relation to interest, this means that what pupils are already concerned with makes a good starting point for teaching, since present interests reflect future actions.

6. Make the investment in time and money count. (See Reason 5, Practice 1.)

### SAMPLE PRACTICES

The enterprises are classified roughly according to obvious range of applicability, as follows:

1. Applicable to Youngsters of All Ages
2. Lower and Middle Grades
3. Lower and Middle Grades and Junior High School
4. Middle Grades and Junior and Senior High School
5. Junior and Senior High School
6. Senior High School

## APPLICABLE TO YOUNGSTERS OF ALL AGES

1. *Halfbacks and Betties.* Many of the minutiae of teaching skills which are difficult for the average child to comprehend in principle can be clarified by illustrative examples close to the pupil's experience.

For example my fifth-grade boys are enthusiastic about football. I try whenever I can to "hook up" my teaching to this enthusiasm. In the study of auxiliary verbs I point out that there is always a verb form which goes along with these auxiliaries: a verb form like "seen," which is like a halfback who can't make a touchdown by himself but needs interference. "Seen" needs an auxiliary verb to "run interference" to help it make a sentence.

Another example deals with Jap Betties and American Thunderbolts applied to the teaching of plus and minus signs in general mathematics and algebra. Many of my boys could not comprehend the difference in signs and were always adding  $+12$  and  $-6$  and getting 18. "A number is a number," they would say. Even the example of thermometer readings —above and below zero—didn't help, probably, I suspect, because these boys hadn't had much experience reading thermometers. But they had followed descriptions of air battles and the Jap Betty and the American Thunderbolt were very real to them. "Suppose," I said, "there were twelve Thunderbolts and six Betties in a dogfight, and each Betty got one Thunderbolt. How many Thunderbolts would be left in the sky?" "Why, six." "You're sure it wouldn't be eighteen?" Well, the Thunderbolts are like numbers with plus signs in front of them and the Betties are like numbers with minus signs in front of them. Whenever you come to an exercise with plus and minus signs just translate them into Betties and Thunderbolts and you can't go wrong.

2. *Writing for Publication.* Pupils gain a great deal of satisfaction and are spurred on to do better work by seeing their writings in print. This alone is justification for having a school or class newspaper, or a school magazine—no matter how crude or amateurish. Our paper is a thirty-two-page mimeographed one illustrated by students. Every class, from kindergarten through the eighth grade, gets something in the paper each issue. I have noticed that children are always pleased to have their stories, articles, poems, and illustrations chosen for publication. If the entire class is writing on a similar subject, a class committee chooses the best ex-

amples for submission to the newspaper committee. At any time an individual may prepare something on his own and submit it directly to the newspaper committee, just like any free-lance writer.

3. *Writing to Pupils.* Our school has a post office and a postal-delivery system, and I frequently choose this means to communicate with children. Rather than compliment a child orally on a good drawing which he has made, I often write him a letter—if the drawing is really good. Rather than call attention to a mistake by speaking to a child, I often write: "Dear Richard, I noticed today that there was a lot of paper on the floor around your desk. I know that you would rather keep your floor clean than leave it untidy, because you always look so tidy yourself. Sincerely, Evelyn Jones." A note furnishes practice in reading and gives a feeling of belonging to each child who receives one. Who doesn't like to get a letter! But of course don't overdo it.

4. *Words and Pictures.* For some time I have had a period during the week at which each child had an opportunity to relate a personal experience about himself when he was very young. Everyone describes a complete incident about himself instead of resorting to the usual rambling type of autobiography. The procedure gives practice in oral self-expression in an audience situation. In order to add more interest to the practice I asked children to bring pictures of themselves taken at the age they were describing, or pictures illustrating the story (if it was a trip), or any other pictorial material. These pictures were shown on a screen through an opaque projector during the narration. This method proved most satisfactory. The children were exceptionally appreciative of the stories and got great amusement out of seeing pictures of their classmates as infants, kindergartners, or first-graders.

5. *Ex-GI's for Geography Study.* Nearly all the countries studied in sixth-grade geography can be introduced with stories, pictures, curios, or souvenirs which servicemen have brought back from the war. Often some pupil in the room has a relative who has been in the particular part of the world in which we are interested. This person is usually quite willing to exhibit what he has brought back or talk to the pupils about the people and the land. The school staff itself may be a rich source of such travel experience. Such an introduction makes an excellent moti-

vation for study of books, maps, and pictures of the places described by these ex-GI's.

6. *Visiting Teacher's Home.* In our first grade we try to have a friendly classroom at all times. A good way to encourage friendliness is to invite the class to take a trip to the teacher's home early in September. I show the children where I live, where I work, eat, sleep, and where I like to sit with a good book or listen to the radio. I let them play with my pet dog and have him do several tricks for them. And I always have something ready to serve the children. When I do this I have discovered that parents often return the courtesy by inviting the class to see their Christmas tree, flower garden, pets, or other home interests.

7. *Safety Contest.* Everyone likes a contest. We dramatized safety in assembly in the following manner. Students were given pencil and paper as they entered the auditorium. The mistress of ceremonies announced the rules of the contest and the prizes which were to be given. Our class then dramatized three scenes: "On the Playground," "In the Halls," and "In the Classroom." The scenes were all done in pantomime and contained a number of unsafe acts. At the end of each scene the curtain was closed and the students in the audience were given three minutes to write down all the unsafe things they had noted in the pantomime and to give reasons why the acts noted were unsafe. At the end of the performance the papers were collected and examined by the evaluating committee. At the next assembly prizes were given to those who had the best answers.

8. *Weekly Interest Program.* Pupil interests can be used to develop self-confidence. We have a program once a week in which each pupil does the thing he or she can do best. Other pupils help decide what that is. A pupil may sing, exhibit drawings, read original poems, show his handwriting, read his favorite story, exhibit good posture, display a hobby, explain an interesting thing he has learned. If a child is very shy he may be selected as a silent helper for one of the others who performs. In this way he appears in the program but does not need to fear that he may have to speak; soon he wants to do something more. The group has developed a fine spirit of making each one feel he has contributed some-

thing, because everyone has been brought to understand that the program is as much for the purpose of developing individual traits as for sharing each other's interests. Although ours is an upper-elementary-school class, this is a kind of activity that can be used at many levels—in high-school English, in high-school activity periods, at any time in any class when part of the class has been withdrawn for some outside activity, during homeroom periods (if they are long enough), and with classes in group guidance.

9. *Self-improvement through Interest.* When I have a pupil who is not doing well in some particular subject or skill, I try to discover some interest I can use to motivate improvement in the subject or skill. For example, I put a boy whose success at number work was very limited in charge of the nature shelf, for he was interested in the nature collection. This responsibility required him to number items on the shelf and to make reports on the amount of space occupied on the shelf by different exhibits during the month. Another child, whose spelling seemed hopeless, I made "housekeeping" inspector. This job required written reports on the state of our classroom housekeeping. A boy who always wanted to talk and hold the center of the stage was given charge of the morning exercises for a certain length of time. This responsibility kept him busy looking up topics, conferring with other pupils, and planning the morning programs.

#### LOWER AND MIDDLE GRADES

10. *Show Club.* Children have formed what they choose to call their Show Club and each Friday is Show Day when we have a short program that has been arranged by a committee of children who exhibit things they have brought to the club to surprise the others. A short talk is given on each object, telling what it is, where it came from, its use, etc. Many things from foreign countries and from other states have been brought. Also interesting articles from *Nature-study Review* and *Science* are presented. This practice was the source of nearly all units studied in geography, science, nature study, and language one year.

11. *Book Trick.* Take a library book you wish the children to read. Read an interesting selection, being careful to use an excuse, and stop short of the climax when all are listening carefully. Just make the book

available and watch the rush for it. The children may dislike your stopping—but how they will read that book!

12. *Fruit and Vegetable Club.* It is frequently possible to tie good habits to pupil interests in competition and cooperation. One fourth-grade Fruit and Vegetable Club utilizes competition in one sense, co-operation in another. We have a chart appropriately decorated with carrots, apples, and other fruits and raw vegetables. Every day that a child eats a piece of such raw vegetable or fruit at recess, rather than cookies or candy, his name is checked on the chart. Pupils enjoy competing with each other for checks on the chart; they also enjoy eating together and slicing and preparing the food for eating. The net result is the formation of the habit of eating fruits and vegetables between meals instead of candies and cookies.

#### LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

13. *Bible Reading.* Instead of reading short selections chosen at random for the daily morning Bible reading, we take up one after another the Old Testament Bible stories. These are stories that are a part of our cultural heritage and with which every child should be familiar. Moreover children find them interesting, even thrilling, since the Bible contains some of the best stories in the world. Preparatory to introducing a story I fill in briefly whatever historical background may be necessary to ensure an understanding of the story. Then we take it in installments, reading a portion of the story from day to day. I usually manage to stop at a point of high interest, thus stimulating the pupils' curiosity. The children look forward to our daily Bible reading with keen enjoyment.

14. *People of China.* In studying peoples of other lands in social studies classes it is almost always possible to motivate the unit by connecting the study with some on-going interest of the pupils. For example in studying China I have been successful in securing interest by beginning with kite-flying. This leads to other Chinese sports and games, and soon we are engaged in a study of Chinese manners, customs, and literature. At other times I have found an interest in silk a successful motivation. Samples brought to the classroom, pictures of various stages of silk manufacture, examples of wearing apparel owned by the children, all command imme-

diate interest. This is followed by study of the silkworm, stories of silk, and legends concerning the discovery of the silkworm and silk, introduction of silk into Europe, and so on. In either case we continue our studies through a collection of Chinese things gathered from the community and brought together as a museum display. Music of China includes a study of the Chinese bell, singing of Chinese songs, and a program of songs and Chinese rhythms. This study also usually includes a bit about the Chinese language, the history of the people, and the geography of the country.

15. *Post Office.* We have a large mailbox in the hall into which at spare moments children drop letters addressed to some one else in the school. At 11:00 A.M. the "postman" makes a collection from the box, and he and his helpers take the mail to a large table in the library and sort it according to rooms. They then distribute the mail to the various rooms, depositing it in the letterbox with which each room is equipped. When the teacher of the room is ready for it everybody gathers around while the room postman delivers the mail to individuals. Everyone reads his mail, which furnishes much opportunity for discussion and comment. Although the upper grade children use the "postal system" to some extent, their interests have broadened; this practice is especially effective with lower-elementary children. It gives them an incentive and an opportunity for abundant writing, reading, and speech.

16. *Gene Autry Fans.* Three rather troublesome boys who did poorly in music class were discovered to be Gene Autry fans, living on day-dreams of being cowpunchers and horsemen. Luckily we located some old guitars. The boys learned to tune and strum them and eventually they picked out Gene Autry's theme song. They worked from this to other cowboy numbers the music teacher taught them. They wrote to Autry, copying the letter four times before they sent it, so that it would be just right. Their general attitude and work improved because they began to find some of the activities of school satisfying.

17. *Using Objects Which Pupils Bring In.* Watch for some expression of interest that can be capitalized on in developing some unit you plan to study. With such a purpose in mind I have encouraged pupils to bring in objects of interest to them. Although it is seldom wise to develop a

unit for a whole class around an object that a single pupil brings in, the response of the class to this object can be used as a gauge of how successfully such a unit might work out.

*a.* A bird's feather brought in for identification led us into a study of plumage. It culminated in the counting and labeling of tame- and wild-bird feathers on a large varnished board.

*b.* A shed snakeskin served the same purpose in mounting skins of animals. We had skins of turtles, fish, snakes, chickens, deer, cows, hogs, sheep, etc., all mounted and labeled. It is necessary to develop the interest quickly before it passes.

*c.* A girl whose parents have many flowers brought one in for identification. Another girl remarked that she wished she knew as many flower-names as the other. Our school has been beautifying the bank between our grounds and the street for several years by adding shrubs and flowers. So I suggested that we identify and classify our own flowers and shrubs. This launched us upon a unit in classification.

*d.* A boy's father was a woodsman. The boy was proud of his ability to identify trees. The father came to the class and talked to us about species of trees. This led to our painting signs and labeling all the trees within a convenient radius of our school.

18. *Letters to Sailors.* Children love to write and get letters. I have successfully used this interest in motivating study of geography in my fourth grade. I secured the names of crew members of a tramp steamer which visited many ports throughout the world. (Such information can be secured by writing to the United States Maritime Commission in New York.) My children entered into correspondence with the crew of this ship. Replies of the crew were received from many different ports with booklets, pictures, coins, and other small souvenirs enclosed. We kept a large map on which we charted the course of the ship, studying the land and people associated with each port of call.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

19. *Study of Pupil Interests.* Our junior- and senior-high-school staff decided to make a study of pupil interests in order to get leads on the improvement of our curriculum and the revision of our courses and teaching procedures. We investigated previous studies of pupil interest in

order to get some insight into procedure and then proceeded to organize our own study and secure data bearing upon pupil interests and needs at different grade levels in the junior and senior high school. We prepared a questionnaire which was given to all pupils; results were tabulated in terms of age and grade level and in terms of high, average, and low scholastic ability. We held conferences with parents, made home visits, and held discussions in our classes to get the ideas of pupils. This study identified for us a number of needs which we were not meeting and gave us a number of ideas leading toward the improvement of the junior- and senior-high-school program.

20. *Story Exam.* I developed a unique and interesting final examination procedure for my eighth-grade pupils. It was for an examination in health and safety, but it could be modified to serve in other connections as well. In this examination there was a story about the Jones's who lived next door. The Jones's did a number of unsafe things, they had a number of habits that were not of the best from a health point of view, and their home was not exactly a booby trap, but there were plenty of places in it to slip, fall down, and break a leg. I prepared the story, had it mimeographed, and asked the pupils to mark all the unsafe and unhealthful things they saw in the story. They enjoyed working on this humorous type of test, especially since they felt it was their judgment that was being tested rather than their rote recall of material from a textbook.

21. *Home Arts for Boys.* Boys in our home-arts classes learn all the sewing needed for camp and bachelor life—sewing on buttons, darning, patching, pressing. They study and learn the importance of good grooming and good manners. In cooking they learn cookery which is likely to be useful—eggs, meats, simple baking, and so on.

22. *Home Canning as a Beginning.* I have found that a very successful unit on which to start the eighth-grade girls in their home-economics work is home canning. The girls use the pressure cooker, water bath, cold- and hot-pack methods, and learn to sterilize jars. They are especially interested in this project because all of them have helped with canning at home. Fruits and vegetables are the principal items which we can. We maintain a close tie-in with home-canning operations (usually going on at the same time—in the fall). The girls report the results of home can-

ning and are frequently able to introduce various modifications and improvements in the home-canning procedure.

**23. *Snakes All Over the World.*** A project on living things and human welfare started when members of the armed services (former pupils in the school) wrote back to the high school to ask about poisonous snakes in certain areas of the world and how harmful species could be identified. Pupils of the general science class became interested in these letters and they were turned over to them for reply. The pupils looked up color markings and characteristics by which snakes could be recognized and, on a large map of the world, plotted areas where they were to be found. The project was then extended to other harmful animals and plants in all areas of the world. These too were added to the map. With the larger and larger role being played by the United States in world affairs, both politically and economically, it is highly likely that pupils now in high school may eventually find themselves in some of the areas plotted on their map.

#### JUNIOR AND SENIOR HIGH SCHOOL

**24. *Homemade Records.*** We use our recording equipment almost constantly. One use is especially interesting and appeals to the pupils—both performers and others. We make records of many glee-club and orchestra performances. When a musical organization has perfected a piece it is recorded on acetate disks. We play these back later for assembly programs, during lunch in the cafeteria, and for other occasions. The boys in the science and physics classes handle the recording equipment and have become quite expert at it.

**25. *Specialized Words.*** Through a discussion of etiquette carried on by the question-box method, my English class became interested in menus and in understanding the terms and descriptions used on menus. We spent some time collecting and discussing examples of menu words and language and in the process discovered that there are a number of fields where specialized vocabulary is essential—music, business, farming, hygiene, cooking, sewing, education, government, religion. The class divided into groups, according to interest; each group prepared a list of specialized terms which every high-school student ought to know. After

each group had done its work on its special field, the entire class passed judgment on whether or not the words and expressions were used often enough to be of general value. The final lists were then studied and the words deemed essential were used in some type of original writing —letters, diaries, radio scripts, or short stories.

26. *Social Behavior.* In the senior class in expression various examples of social behavior, both good and bad, are acted out in the classroom or described orally by the teacher. One used with success is a telephone conversation in which a girl has not accepted an invitation and the boy who invited her is insisting upon knowing why the girl has refused him. Another is a scene in a drugstore where a group of boys are enjoying some ice cream. Some girls come into the store, go to the table where the boys are, and almost force the boys to invite them to join the group. Only a few such examples are required before some one asks: "What *should* a boy or girl do in such cases?"

This first lesson is followed by others devoted to discussions of unsigned questions submitted by pupils in writing. The teacher promises to help the pupils find the correct answer to any question properly asked. Some might advise against this for fear of receiving the wrong type of question, or because the pupils might consider the questions a joke. Such problems have never occurred. The first questions usually deal with introductions, table etiquette, or telephone courtesy, but it is not long before pupils ask for help on problems of a more personal nature.

A partial list of subjects discussed shows that both boys and girls are interested in behaving in ways acceptable to society: (a) "going steady" during high-school days; (b) exchange of gifts between boy and girl; (c) social practice at dances, in tea rooms, restaurants, etc.; (d) problems found in mixed groups (how may one properly suggest stopping at a rest room?); (e) what preparation should a man or woman make before getting married? Adolescents are keenly interested in knowing the answers to such questions.

In order to be successful with this project the teacher must remember three things: (a) Win the confidence of your pupils; (b) remember that pupils belong to a different generation from yours; (c) be sure to accept any questions without surprise.

## SENIOR HIGH SCHOOL

27. *Physics and Automobiles.* Most of the physics students have just obtained their drivers licenses or are about to get them. We learn which parts of the automobile the driver can damage by improper use or neglect, the proper care of these parts, the purposes of the parts, and their location. We also consider reasons why a car might not start and how this inconvenience might be avoided.

28. *Latin and Warfare.* In Latin class many opportunities arise to compare methods of warfare used in Caesar's time with modern military practices. Pupils are sometimes surprised to note the similarity of barricades of bramble bushes and barbed wire, of buried sharpened stakes and land mines, of mechanical stone-throwers and long-range guns, of *catapultae* and machine guns, of *testudo* and tank, of cavalry flanking forces and fast-moving motorized units, and so on. We discuss these similarities and I attempt to make pupils see one of the fundamental principles which justifies all classical (in fact all liberal arts) studies, namely, that men and nations have always faced much the same problems and have tended to invent similar ways of solving them, and that differences in their solutions are to a large extent due to differences in their knowledge and control of nature.

29. *Dance Savoir-Faire.* About a week before the prom the committee arranges a *savoir-faire conference*. The purpose of this conference is to acquaint the students who will attend the prom with those standards of deportment acceptable in the best society for functions held in public places. Also many questions which arise in the minds of the pupils are discussed. Dress, flowers, checking, tipping, conduct in the dressing rooms and on the dance floor, conduct at the refreshment table, courtesies to guests, and the way to perform introductions—these are among the topics touched upon. All who are planning to attend the prom must attend this meeting. A speaker is always invited to address the pupils and the latter ask questions after the speech is over.

## Practice 4: RECREATIONAL INTERESTS

*Using a Variety of Sports, Team Games, and Individual and Small-group Games to Develop the Recreational Interests of Pupils of Every Age and Level of Ability*

*Use This Practice to . . .*

- d. Develop desirable character and personality in pupils.
- e. Develop good citizenship.
- f. Develop attitudes and habits of good health and safety.

WHEN people talk about overcoming juvenile delinquency, intolerance, and some of the other ills that beset society and its young people, the first thing they think of is expanding facilities for recreation. The attitude of such people must be that Recreational Interests are a very powerful tool for the accomplishment of many important objectives. The attitude compares with the old saying, the Battle of Waterloo was won on the playing fields of Eton. It compares also with the belief of many physical-education people that games develop character and train leadership. The greatest need of all organisms is to be physically and mentally active; this probably explains whatever power recreational interests have over character- and citizenship-development. This would suggest activity not only on the playground and in extracurricular projects but in every classroom.

Overemphasis of varsity sports has meant careful coaching of the few at the expense of the majority in many schools of the nation. We

have operated on a different principle here from that which characterizes most schoolwork. In most schoolwork we tend to emphasize the average and cater to those below average. But in varsity sports we tend to cater to those of exceptional ability; we seek out and develop the geniuses of sport. We put them in the charge of a master teacher who is paid a master teacher's wage. Without underrating the importance of interscholastic sport, better schools have made it possible for practically every pupil to engage regularly in some appropriate sport. A wide variety of sports is provided to meet the varied needs of a large group of pupils of many interests, ages, and levels of physical maturity. The intention is to include not only those sports in which children show present interest but also those which may carry over to enrich later life.

Whatever value games and sports in and of themselves may have in developing the qualities we talk so much about—leadership, followership, citizenship, general qualities of character—a wise and observant teacher can greatly enhance. The teacher who is a leader of a group of children engaged in games and other physical activities has an enviable opportunity to observe and guide the growth of youngsters. Many good teachers welcome the opportunity and are loath to surrender the leadership of their own classes in games and group activities.

The effects upon health and physical growth of a well-rounded program of physical education are of course obvious. But unless the school program is highly varied, providing many different kinds of games and other activities at every level, with plenty of time to engage in them, the full effect of recreation upon health and physical maturity will not be realized.

The use of Recreational Interests includes, however, not only games and sports. Different people do different things for recreation. Some people like to paint, some like to do jewelry work, some like to participate in plays, some like to read, some like to putter in a woodshop. The list can be extended endlessly. The program of school and classroom should be so rich in activities of a cultural and entertainment nature that pupils will have many possibilities from which to choose present and future activities which are purely avocational in nature. The key to the use of Recreational Interests is relaxation. That which relaxes is recreational. To teach people to relax, to give them activities by means of which they can relax—this is an important obligation of a good school program in these days.

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

#### 1. When an organism is ready to act it is painful for it not to act.

Most growing organisms are action-centered. The act of growing is itself a violent action, and physical growth is facilitated by physical exercise. Long periods of physical inactivity reduce total efficiency. That is why a modern school program is balanced in terms of work, relaxation, physical action, and rest.

#### 2. Emotional tension decreases efficiency in learning. "All work

and no play . . ." is the way we have heard it for ages. Constant, monotonous attention to any one thing is a producer of tension. The typical old-style school-room was (and still is) an inhuman producer of tension. Relaxation provides the most human and most efficient design for learning.

#### 3. Physical defects lower efficiency in learning. (See Reason 5,

Practice 2.)

### SOCIETY SAYS:

#### 4. The basis of a strong nation is healthy people. That is why

physical education is as prominent a part of the modern school program as any other kind of education.

#### 5. We should try to draw out the full capacities of everyone.

This means physical capacities as well as any other kind. It means full physical health as well as full mental health and realization of full mental abilities.

## SAMPLE PRACTICES

The sample practices are classified under the following headings:

1. All Age Groups
2. Lower and Middle Grades
3. Middle Grades and Junior High School
4. Junior and Senior High School

**ALL AGE GROUPS**

1. *Variety Assembly Program.* We hold many assemblies in which a number of classes each contribute a selection. One puts on a rhythm-band number, one does a piano or instrumental number, another contributes a song or pantomime. This type of program gives many children an opportunity to appear before others during the year. It does not require much time to prepare and is usually well received by pupils, as ordinarily any variety program is interesting.

2. *Educational Camp.* A camp has been established which serves all the schools in our county. About seventy fifth- and sixth-grade pupils at a time come for a twelve-day period, accompanied by their classroom teachers. The fee which each child pays covers only the cost of his food. The camp director and his assistants are well trained in the field of education as well as of recreation. A full-time nurse is on duty also.

Emphasis is on educative experiences. Believing that the adult ability to give community service is not accidental, but is something that is learned and can be planned and taught in childhood, all children are urged to volunteer for a certain amount of community-service work at the camp—repairing sports equipment, improving buildings and grounds, sharpening tools, painting, etc. Children also take care of their own needs of daily living—washing dishes, cleaning cabins, gathering wood, etc. The camp bank, the camp store, the camp post office, and the news bulletin are all pupil-operated enterprises, set up on the pupils' first day at camp.

Certain educational competencies are called into play—writing checks against one's account in the camp bank, making purchases at the camp store, writing parents and friends at home. Such experiences as nature trips, overnight hikes and canoe trips, and cooking out of doors are designed to make as much use of science knowledge as possible.

Before a class goes to the camp much preparation is undertaken in studies in the classroom, and activities following the camp experience are intended to draw as much educational benefit as possible from camping. The whole project is an experience in democratic living.

3. *County Fair.* On "open-house" day in our rural schoolroom we staged a county fair from 4:00 to 8:00 P.M. to which parents and members

of the public were invited. Peanuts were sold by a boy who verged on being a monotone. A "Hindu" exhibited a cobra (garden hose with paper head and braided tail) and lectured on India. Life-size cardboard animals which had been made and painted by the children included sheep, cow and calf, sow and pigs, and so on. They were in wire pens along the blackboard. Breed labels were printed above each. The poultry were in crates made from cartons. Ribbons were awarded by a group of farmer judges who enjoyed immensely the judging of the cardboard animal exhibits.

4. *International Fair.* One of the most interesting of all days in our elementary school was the day we held the International Fair. We started it in this way: Children were asked to bring to school any family treasure of handwork, any heirloom or article which had been collected in any part of the world, or any example at home of early-American craft. There was a surprising response. We held an exhibit of these things in the school assembly room. The walls were covered with beautiful examples of folk craft from all over the world. The whole neighborhood became interested. Many came in costumes native to their own "old country." (Most of our children are of foreign-born parentage.) The purpose of the fair was to foster respect for the best traditions brought from the old world and to help pupils to realize that beautiful things can come from any country, or climate, or age.

5. *Intergroup Play.* Ours is a fairly well-to-do community surrounded by other communities, some of which are poorly farmed. To promote intergroup understanding our physical-education department sponsors regular play days. To each play day the boys and girls from a school in a nearby district are invited. Various team games are organized between teams made up of students from both communities. On occasion a social-studies class or elementary-school class invites a similar class from a school in a nearby community either for a play day, for some other activity, or to meet with them for the study and discussion of some interesting topic.

6. *Field Day.* We like to put on a field day two or three times a year when the weather is good. We emphasize good manners, careful planning of the events, good sportsmanship, and cooperation whenever we

stage these field days. No awards are given—those who win, win for the fun of it. Paper hats make it a gay day. Primary children put on a May-pole dance, second graders put on a shoe race, third graders have a bag race, children of other grades participate in relays, jumping, tug-of-war, dodge ball, high jump, and ball throw. A field day such as this has some of the same spirit and fun as the famous games and festivals of the old world.

7. *Year-round Teachers.* Teachers of physical education, band, drawing, and painting are employed on a twelve-month basis. This enables our school district to operate a recreational program in each of these subjects the year round. Physical-education teachers conduct a summer recreational program for younger and older children as well as for adults. The band teacher holds band classes during the morning and band practice in the afternoon. Arts, crafts, and shopwork are also offered all day during the summer months.

8. *Noon-hour Recreation.* The noon hour is often a chaotic time in school. But it need not be. As a matter of fact it should not be. For the practice in good behavior which is stressed during class and activity time can be cancelled by wild and uninhibited behavior at noontime. A little planning can make the noon hour as educative, or at least as interesting, as any other time in the school.

We begin with the cafeteria—usually a noisy place. Soft music is played from records while pupils eat, and the conversation is usually less strident and the noise less deafening. Beginning about twenty minutes after the start of the noon hour a schedule of games is organized in the gymnasium and auditorium. A great variety of games is provided—usually quiet games for after lunch (dancing being the most strenuous). Motion pictures of entertainment value are shown. A reading room is provided where children may select comic books, children's magazines, picture books, and novels. When the weather is good a similar schedule of games is organized for outdoors.

#### LOWER AND MIDDLE GRADES

9. *Character-development in Play.* The growth of sportsmanship and character through playing competitive games with other classes has been

very interesting to watch. My second grade learned to play batball. After playing alone for several weeks my pupils decided to ask the third grade to play them. I prepared them to take a beating, but they were well aware that they might be beaten. They were—and they took it very well. Their spirit was fine. They saw those things that the older children did better than they did and saw where they needed more practice. They wanted very much to beat the other class and so they worked harder perfecting themselves at the game. After trying two or three times they were finally able to win from the third grade and were very delighted. But they still showed the same good spirit. There was no bragging about it, which pleased me considerably. The experience was excellent for both classes, and both the third-grade teacher and I felt that an important notch in the character-development of the two groups had been cut.

10. *Primary Physical Education.* Our physical-education program in the primary grades consists largely of rhythms and simple folk dances. We emphasize basic rhythms such as walking, running, skipping, jumping, and galloping. Our objective is to develop a natural response to music. We play games involving various gross motor skills. We also have tumbling. Tumbling is a challenge to every child's courage and initiative. There is splendid cooperation among art, English, and music teachers in helping the physical-education teachers develop an understanding of various dance forms: minuet, waltz, square dances, and many national folk dances.

11. *Honest Leadership.* I have found this little device useful in one phase of developing leadership. When children are playing games at school each team selects a captain. Each captain then calls fouls committed by the other team against his team. His judgment is final. There is no appeal to teacher or to anybody else. Captains who cheat are not popular; in general pupils chosen as captains are not only capable but honest.

12. *Children as Game-directors.* Toward the end of the lunch hour the children of the fifth and sixth grades act as game-directors for the primary children in our six-grade elementary school. Each older girl takes a group of primary girls for ten or fifteen minutes on the playground,

while each older boy has a similar group of boys. Older boys and girls rotate in taking this responsibility.

13. *Toy Lending Library.* We have a toy lending library in our school system. Toys are collected and then repaired and renovated in the school shops. Other toys are made in the shops. Still other toys are the result of special contributions by interested persons. Toys are displayed in the toy library which is run by the pupils under the supervision of a teacher sponsor. Children borrow toys from this library on limited loan in exactly the same way they would borrow books from the library.

14. *Friday Social Hour.* In my fifth grade we hold a social hour of games and music as a part of every Friday afternoon from two until three o'clock for those children who have brought all their work to completion. Needless to say all work is always finished. The gains from this social hour are manifold. The children are constantly on the lookout for new games to play, they show a real interest in the music which is to be used, and they learn to share their refreshments and develop good party manners.

15. *Quiet Recreation.* On cold and rainy days we have a program of recreation for recess time. Pupils of the primary grades are interested in such things as coloring books, puzzles, paper dolls, mechanical toys, simple card games, sewing picture patterns on cardboard, and sewing doll clothes.

Pupils in the intermediate grades like such games as bagatelle, pickup sticks, checkers, dominoes, old maid, rummy, puzzles, jackstones, and currently popular commercial games like Kate Smith Game, American Flag Game, Squadron and Insignia Game, and Lone Ranger Game. Boys also like foul-shooting, deck shuffleboard, table shuffleboard, and ping pong.

16. *Group Ownership and Individualism.* One of the best aids in developing unselfishness that I have discovered is the whip of group approval or disapproval. Every child desires to be liked in his own group. To illustrate: A third-grade boy of well-to-do family was very selfish. The group bought a big play ball by contributing a nickel each. This boy

stormed every day because he could not have the ball all the time, saying he spent his money for it. Finally he demanded his nickel back. I quietly handed him a nickel and said, "Of course you won't expect to use our ball now. You may bring one from home and play by yourself if you wish." I felt very proud of him when just before dismissal he walked up to me and said before the group, "Won't you please take my nickel back? I want to play with the other boys and girls. I'll try to play right."

17. *Small, Medium, and Large Footballs.* We use three sizes of footballs to teach the game of touch football in our junior high school and upper-elementary grades. These balls are sized to fit the hands of the pupils of various levels. It is easier to teach forward passing and kicking with a ball of appropriate size rather than with the regulation-sized football. The results are gratifying. Pupils learn the essential elements of the game more quickly. They enjoy the game more because they play a better game when the ball is correctly sized to fit their hands.

18. *Noon Games Supervised by Physical-education Staff.* Our physical-education staff has lunch at 1:00 P.M. instead of at 12:00 as does the rest of the school. They are thus free to supervise the playground program at lunchtime. Game areas are designated for various age groups and this practice helps to prevent difficulties. Game-area leaders are appointed and rotated. Their job is to assist the physical-education staff member assigned to their area and be responsible for equipment.

19. *Game Program for Mixed Group.* Even in a small group of children, mixed as to age, I find a variety of sports necessary. Several games must be in action at the same time because of the differences in size and ability. While larger boys play mushball, girls volleyball, etc., there must be a simple ring game or other game for the little ones. This avoids accidents. The teacher must circulate from group to group. Often an older pupil will conduct a game for a smaller group. Unskilled and shy children in each group must be searched out by the teacher and taught to play. Often they lack muscular coordination. Such a child can be taken to a smaller group and used as a leader there until he feels confidence. Then he will naturally gravitate back to his own group where he will participate. A child who is an "only child" often does not know how to

play with others. Quite often I play on the team, ask the special child to assist me, commend him when he does well, and finally "fade out," leaving him to take my place in the game.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

20. *Intramural Competition.* The Referees Club is made up of all boys and girls who want to learn the courtesies and skills required of officials. They meet with the physical-education instructors during the activity period to learn how to officiate. They secure practice in officiating at the intramural games at recess, during physical-education periods, and during the after-school recreation program. Each club member is given specific referee assignments at the same time that the intramural games are scheduled between homeroom groups. The group he referees may or may not be of his own sex or age group.

Teams are organized by homerooms; captains are elected in the homeroom period. All team assignments are made by the captains and they are responsible for having their team at the field on the day scheduled. Schedules are made out at least a week in advance and copies sent to each homeroom. Also a note from the physical education director is sent to the classroom to remind the team on the day of the game. Congratulatory notes are sent by the losing homeroom to the winners, and notes expressing appreciation for a good game from the winners to the losers.

21. *Afternoon Play Program.* The school day is extended every day in a play program which lasts from 3:00 to 4:00 P.M. In addition to plenty of outdoor space with the necessary equipment for different kinds of games, we have a large gymnasium, an indoor playroom, and a game room (for quieter games). Games which touch upon almost every recreational interest are included at some time during the year—soccer and football, volleyball and badminton, track and baseball, and sedentary games like card games, table games, and marbles. Frequent tournaments are held throughout the year. A jacks tournament, running for a month or two, will include every girl and boy who can play jacks well enough to want to compete. The marble tournament in the spring likewise includes almost all the pupils. The play program is supervised by the gym teacher, who has the assistance of the regular teaching staff. Each teacher has a weekly supervisory assignment.

22. *Recreation Program.* We have followed a very successful plan for supplementing the regular physical-education staff. Our superintendent selects teachers, both men and women, who are not only qualified but willing to help with the program of after-school sports. Extra remuneration or other consideration is given those who help. Practically every boy and girl from seventh through twelfth grade takes part in after-school athletic activities. Intramural competition is offered in football, soccer, running, archery, horseshoe pitching, basketball, wrestling, boxing, rifle, volleyball, bowling, badminton, table tennis, tumbling, baseball, lacrosse, track and field sports, golf, softball, and tennis.

Our interscholastic program is also varied because of this same policy of utilizing the coaching and athletic interests and abilities of members of the academic school staff. We do not necessarily play down the few team sports which are common in interscholastic competition, but we provide so many that no performer and no team gets all the interest of the students. We hold competition with other schools in varsity, junior varsity, and freshman football, soccer, cross-country running, basketball, wrestling, rifle, track, baseball, lacrosse, tennis, golf, and softball. Many of these sports are for both sexes.

23. *Music Course.* Our ninth-grade music course, which meets five days per week, is intended to make youngsters intelligent music-listeners—to all kinds of music. We study different kinds of music—folk music, primitive music, jazz, light concert music, and classical and modern serious music, attempting to discern the differences between these various styles. For this we use recordings, as well as our own singing. We study musical forms which many a concertgoer does not understand but which are essential to a true appreciation of what one hears—fugue, sonata, concerto, and symphony. Recordings are used to illustrate these forms. One period each week is devoted to current events in music. In addition to discussion of famous musicians and musical organizations, we keep up with musical events in the country by means of the music page and the critical writings in some of our large city newspapers.

#### JUNIOR AND SENIOR HIGH SCHOOL

24. *Student Coaches.* Girls and boys of the senior high school may join the Student Coach Club which holds one discussion meeting per week,

supplemented by two hours per week for coaching junior-high-school students under the physical-education teacher's supervision. Practical and written tests in the sport selected and a first aid examination, all successfully passed, entitle the pupil to the student-coach certificate and emblem. Certified student coaches are eligible to assist in the coaching of intramural teams. The discussion meeting each week is devoted to such topics as the psychology of teaching and coaching, the planning of lessons, the study of skills in the various sports, and the review of books and other materials on sports and coaching. Definite results in development of leadership and in improvement of self-confidence and poise have been noted.

25. *Bowling Club.* For the past three years I have had a bowling club which meets after school on Fridays. The club is open to all eighth- and ninth-grade pupils, but is limited to forty members as there are only eight alleys available. The first forty to apply are in, and the remainder must go on a substitute or waiting list. Many get a chance to join a team because of drop-outs. The proprietor of the local bowling alley has been very cooperative in giving us cut rates. He knows of course that the club means more bowling enthusiasts in the town as these youngsters grow up.

Our first meeting is held in a classroom, where a president and secretary of the Bowling Club are elected and the rules of the game discussed. As there are always some who have never bowled, the first four afternoons at the alleys are given over to instructing and establishing averages so that teams can be arranged. The eight highest-average bowlers for the first four games are captains, and the teams are balanced so as to give each a chance. After the first round handicaps are established. They are changed after each round. The secretary keeps the averages on filing cards and places a report of individual and team standings on the school bulletin board each week.

I feel that the club offers an opportunity for a wholesome recreation that has carry-over into adult life. Moreover it gives me an opportunity to meet and study the youngsters outside the classroom.

26. *Large Sports Squads.* We like to encourage a large amount of participation in our sports program—even at the interscholastic level. Our football squad, for example, usually numbers 120 uniformed boys. They all participate on the first team, second team, junior varsity, or

squad teams. We also try to play an interscholastic football schedule that is not so strong but that a large number of second- and third-string players can be used in varsity games. Our track team numbers over 100 boys each spring. Baseball attracts fifty; swimming takes care of fifty or more; and basketball carries a squad of thirty-five to fifty. Many boys try out for each of these sports and those who have any chance at all are never cut from the squad, except where facilities are extremely limited.



## Practice 5: PRODUCTIVE EXPERIENCES

*Using Productive Experiences Where Real Work in School and Community Develops Pupils' Skills, Knowledge, Talents, Understanding, and Attitudes for Individual and Group Life*

*Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b.* Uncover and develop many different kinds of special talents in individual pupils.
- c.* Guide pupils in learning to think.
- d.* Develop desirable character and personality traits in pupils.
- e.* Develop good citizenship.
- f.* Develop attitudes and habits of good health and safety.

“THE school of experience” is a good teacher. That is because the school of experience is the real thing. Productive experiences as used in teaching are always real. To the pupils they are the real thing. They *are* life; they *are* work. They are *not* reasonable facsimiles.

*The outcome of a productive experience is some concrete piece of goods or some worthwhile service—something that somebody can use, something which is of benefit.* Productive experience as a teaching tool hinges upon encouraging and permitting pupils to do jobs that must be

done somehow by somebody. If pupils don't do them someone else has to do them—like cleaning up, tending a garden, clerking in a store. It is not expected that all pupils will do such jobs as well as someone who has had more training. But the school becomes a real learning laboratory where what is learned is put to use in living and working. Still, one cannot produce useful goods or services without some kind of skill and knowledge. Failure is easy to see—by pupils as well as teachers—when a thing produced will not work as intended.

*You learn things in relation to their use* when you learn through productive experiences. Productive experiences then make for efficient learning. If there is a lapse of time between the teaching of skills and facts and the use of those skills and facts, then much will be forgotten before it can be put to use. Therefore teaching which depends solely upon talk and reading and drill is not efficient teaching. Wherever facts and skills can be presented as part of a useful activity their learning is more lasting and efficient. So it is too with the skills of citizenship, the attitudes which form character, the abilities which make for sound thinking. These, if they are learned at all, are learned not by talking about them but through use that is lifelike and real.

When properly used in a school, productive experiences have those values which come from growing up on a farm under wise guidance or living in a family where many of the goods and services used by the family are produced by all the family. Life in simple communities is naturally educative because every member must contribute. Schools are simple societies too, and the same educative values can be realized when pupils have to produce goods and services by which the community lives. As on the farm or in the home the depth of the education is enhanced by wise observers and guides.

In vocational training productive experience is usually referred to as "work experience"—where laymen, as model employers, become teachers, and their places of business become "schoolrooms." But this does not mean that a pupil must concentrate upon *one* vocation. Part of a truly liberal education lies in firsthand knowledge of many fields. Work is broadening—work in a factory for the future lawyer, work on a farm for the future businessman, work on a road gang for the future minister. Productive experiences are not exclusively a high-school method of teaching. They can be used early in a pupil's life, for there are many duties

and responsibilities that can be delegated even to four- and five-year-old children.

*Productive experiences make one of the most powerful of teaching tools.* So much can be learned from undertaking a real, worthwhile job; not only the skills required to do it, the knowledge lying behind it, but attitudes, social living, insights into life itself. Six of the seven objectives described in Part Two can be accomplished by means of productive experiences used as a teaching tool. Lack of productive experiences tends to make a school really "schoolish," artificial, remote from life, cloistered, imprisoned in an ivory tower. The presence of productive experience is one of the hallmarks of modern education. As remarkable as the development of this tool has been in the past two or three decades, even the best of schools have only scratched the surface of the possibilities that lie in the use of productive experiences.

### SAMPLE PRACTICES

The sample practices are listed under the following headings:

1. All Age Levels
2. Lower and Middle Grades
3. Middle Grades and Junior High School
4. Junior and Senior High School
5. Senior High School

### ALL AGE LEVELS

1. *School Banking.* Our school bank is a real bank and it works like this: a different class or group of pupils acts as bankers each week. These pupils handle all the details of the operation. Different days are assigned to different grades to do their banking in order to avoid too much confusion during banking hours. At 12:30 each day the bank opens for business and remains open for a half-hour. The teller's window is a decorated counter-and-window arrangement made of cardboard supported by thin strips of wood and is stationed at the end of the main hall.

Pupils who wish to deposit funds go first to a desk where their passbooks are kept on file. They then go to a shelf set up on the other side of the hall where they find deposit slips. They put name, date, and amounts on these—just like in a regular bank. They present deposit slip,

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. The best way to learn a part in life is to play that part. This is the apprenticeship idea. Pupils are apprentices not only to vocations but to all the acts of successful citizenship and personal competence. Upon leaving the school the parts in life which they are to play are not completely new to them if they have practiced those parts in the school.

2. Learning is more efficient and longer lasting when the conditions for it are real and lifelike. The various productive experiences are slices of life. Attitudes, habits, skills for life, are best learned when the activities of school are like those of life. This means making the methods of teaching as much as possible like those one uses in actual living.

3. Piecemeal learning is not efficient. We learn facts and skills best when we learn them in a pattern, not as isolated bits of subject matter. The facts and skills that we learn become part of a pattern when we learn them in relation to their use—when we practice them as part of a real job that we have to get done.

4. You can't train the mind like a muscle. There is no body of knowledge that is the key to "mind-training." There is no set of exercises that will sharpen the wits as a grindstone will sharpen steel. This means: Don't isolate the things you want to teach from the real setting in which they belong.

5. A person learns most quickly and lastingly what has meaning for him. An act takes on meaning from its outcome—what the act produces. To produce a thing he wants or can see the value of, a person is likely to master the skill necessary to produce it if he possibly can.

### SOCIETY SAYS:

6. The school is a simplified version of society. We set up schools so that pupils may learn to take their places in society. The school should therefore be as real and as like society as possible.

7. Keep your eye on the real and significant concerns of human living. (See Reason 6, Practice 1.)

8. Make what you teach useful and teach it so that it will be usable. There is no room for deadwood in a modern school. Begin with a productive experience the outcome of which is of value; do not try to justify some subject by implying a value which was never intended.

## SAMPLE PRACTICES (Continued)

passbook, and money at the teller's window. The teller checks the amount, makes the entry in the passbook, receipts the deposit slip, which is returned to the customer, and keeps the passbook.

At the end of the banking period passbooks and money are taken to the room of those pupils who are acting as bankers for the week, and there the whole class carries on the work of checking and balancing the accounts. Tellers read off amounts of money as recorded in the passbook. This amount is written in a column on the board by another boy or girl and on slips of paper by all other boys and girls of the class, at their seats. The column is totaled and of course must balance the amount of money the teller has collected. If it does not the class must check for the error.

After school the bankers for the week enter all the amounts from the passbooks on individual account sheets. Each pupil who uses the bank has a separate account. At the end of the week the bankers for the week accompany a teacher to the downtown bank where the money is deposited. Withdrawals may be made only on Friday—when sufficient money has accumulated. However if a pupil wishes to withdraw more than fifty cents he has to give written notice ahead of time so that sufficient funds will be on hand. For withdrawals regular checks are used with our bank's name printed on them.

The bank has made the children interested in saving. They frequently keep a bank account throughout the whole period of their stay in the school, so that some have a hundred dollars or more to withdraw upon graduation. We feel that arithmetic, citizenship, and sound character traits all are developed through our school bank.

**2. Raising Food.** Part of our school campus is used as a garden. Each pupil takes a regular tour of duty at planting, cultivation, and harvest time—although a man is hired during the summer vacation. We raise vegetables for the school lunchroom and they are canned in the home-economics kitchen. Another product is grains for animal feed for the hogs and chickens. A rotating detail of students each day collects scraps from the luncheon trays to feed the hogs. Products not needed in the lunchroom are sold through regular channels by the students. The money is put in a fund which is sometimes used to buy equipment or animals.

3. *Getting Action.* For several years the state highway department removed snow from the highways but, in accordance with their policy of letting owners remove snow from private drives, never removed snow from the school driveways. The children of the seventh grade discussed this situation and decided to do something about it. They wrote to the highway department pointing out that school driveways are not private driveways and asking them to reconsider their policy and remove snow for them. The letter brought results. After further discussion of the incident they wrote a letter of thanks and then began to look about them for other undesirable conditions about which they could rightfully ask local and state government agencies to do something.

4. *Book Reviewers.* Near Christmas each year when children's books come into our local newspaper for review the newspaper sends them to our elementary school. The boys and girls of the school—depending upon grade level of the books—then read the books and write reviews for the paper. They are actually published on the book-review page of the local paper. This practice enables the newspaper to say that this is what children who read the books will think of them. The review copies of the books are added to the school library.

5. *Costume Wardrobe.* We give a great many plays in our school—class plays, assembly plays, and presentations to which the public is invited. We decided that we should save the costumes made by the children for these presentations and in time we would have a collection which could be used over and over again, making the spur-of-the-moment presentation of a play relatively easy.

A dead end of a hall was partitioned off by the school custodian with several boys to help him. Shelves for one side of this improvised room were made by the sixth-grade-shop boys. Another sixth-grade class earned money to purchase mothproof closets to line the opposite wall of the room. The costumes then on hand were sorted, boxed, and labeled by pupils of still another class.

Now when a class is preparing a dramatization it sends a committee to the costume room to examine the material available and to select what it wishes to use. The committee may withdraw anything by signing for it and leaving the card listing the materials taken on a spear hook at one side of the door. Often a class adds to the collection by making new cos-

tumes. The costumes are kept in good condition by the children who use them, for they usually launder and press them before returning them.

6. *Whole-school Activities.* There are many whole-school activities that draw upon the talents of pupils in practically every department. We welcome the opportunity for such activities and use them as a definite part of our educational program, as well as to tie various departments of the school closer together in a general program. Such activities, for example, are the savings bond program, the Community Chest drive, American Education Week, or National Brotherhood Week.

The commercial students are called upon to cut stencils, mimeograph, type, take dictation, transcribe, collect money, and keep books. The English students are called upon to write radio skits, stage shows, slogans, poster copy, and reports for both school and local community papers. The art and industrial-arts students provide posters, charts, graphs, cartoons, maps, and displays. The mathematics students calculate home-room and school percentages and tabulate distributions and total sales, reporting these figures to those engaged in making reports and posters. The social-studies students conduct surveys related to the activity. The music department provides music for special meetings and assemblies, for radio programs, and for "broadcasting" over the public-address system. Members of the speech classes promote sales by broadcast speeches and talks in assemblies. The visual-aids department secures and shows motion pictures dealing with various phases of the activity. The student council takes charge of the general organization of the work of all the pupils.

7. *Courtesy.* When a new pupil comes to our second grade I ask several children to take care of him. One child takes him around the building, showing him where the cloakroom and lavatory are located. Another child prepares a desk for the new pupil, helps assemble books, crayons, scissors, pencils, ruler, etc. All the children are introduced and are expected to be kind and considerate. At recess one child stays with him all the time and sees to it that he can find his way home at dismissal.

8. *Making Announcements.* My sixth-grade art class cooperates with the school P.T.A. by creating novel and artistic announcements for each P.T.A. meeting. Ideas carry out the monthly holidays, etc. Recently the

P.T.A. held a "white elephant sale." The pupils designed and made announcements in the form of a white elephant with an attractive sign hanging on his back announcing the sale.

#### LOWER AND MIDDLE GRADES

9. *Business Office.* Our room has a business office. It is a small booth made of wallboard and fitted with a door. Over the top of the door is the label "Office," with a schedule of office hours. On this schedule is the time for making lunch payments, the time when Red Cross contributions are received, and so on. The various duties are rotated among the children of the class, who go to the office to discharge their several responsibilities. All record-keeping is done in the office, where records of payments and other business are kept. We try to keep things in the office business-like, with separate record cards for each activity transacted there. All cash is kept in a box with a padlock which stays in the office. The children have a great deal of pride in their office and I feel that the practical experience they gain there is more valuable than is the case when these various duties are taken care of desultorily, sometimes here, sometimes there.

10. *Second-grade Store.* My second-grade children organized a real store. They sell paper, pencils, erasers, and other school-supply items. They planned it, built it, ordered stock. They take turns as clerks, go over tills, keep a daily record of sales and profits. By advertising with posters they have attracted patronage from pupils all over the school. Among the things which they are learning are that all income is not profit and that the proprietor can't take things that he wants from the store and show a profit. They have learned also to judge items that sell slowly or rapidly and make necessary changes in the stock they handle.

11. *Planning for Experiences.* A great deal of my time in lesson-planning is taken up in devising lifelike experiences for my elementary school pupils so that they may have abundant firsthand experience with the facts and skills which we are studying in class. I literally comb the school and its grounds for opportunities of this kind. For example one spring I received permission to let the class plant tulip bulbs around the shrubs and trees on one side of the school building. After considering several designs

we decided to plant seven bulbs around each shrub or tree. There were five shrubs and trees. This, then, yielded some practical arithmetic problems: How many bulbs do we need? What is the price? Each? By the dozen? (I had secured from the florist a number of copies of his price list.) How much would a dozen cost at the price given for bulbs purchased at so much each? How much would all the bulbs cost at the price for each? How much at the price per dozen? Which is cheaper? How much would we save by buying them by the dozen? How many would we have left over after buying them by the dozen? And so on. Each child did the calculations privately, and then we compared results to correct errors.

There are many similar undertakings about the school and classroom which can yield similar material for exercise in the basic skills.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

12. *Responsibility.* A special school responsibility is allocated to each class in our school. The lost and found department is operated by one of the third grades; the other third grade is responsible for school cleanliness. One fourth grade takes care of the school museum and hall display cases; the other fourth grade serves as the school messengers who make deliveries from school office to classrooms, deliver milk, etc. One fifth grade operates the school bank; the other the school store. The sixth grades operate the newspaper and the bulletin boards. One seventh grade works as school library helpers, checking out books at noon and after school, while the other seventh grade takes care of the picture file. A graded set of responsibilities allotted to each class helps insure that these responsibilities will be ably discharged and provides opportunities for youngsters to grow in competency and character.

13. *School Duties.* Those useful jobs in and around the school building which the pupils are capable of doing are placed in their hands. For example:

The flag is raised and lowered daily by three boys.

Two boys are appointed from each of the upper three grades every week to pick up the paper litter on the playground and front lawn.

Bulletin boards for the halls and classrooms were cut, framed, and hung by pupils.

Milk is delivered to each room by chosen pupils, the daily delivery is checked, and the empty bottles are returned and cased by them.

Orange juice is mixed and delivered to each room by the children.

Each room, from second grade up, has two librarians trained to issue books during each room's library period. Four sixth-grade girls are librarians during the recess library periods.

Answering the phone is placed in the hands of the pupils, and they are coached for this important job.

14. *Flower-raising.* Near the rear entrance to the school grounds there were vegetable beds which had not been used since the war. Our class asked for permission to cultivate these beds in flowers, with the help of the science teacher. We cleaned up the beds, trimmed the shrubs and perennials that were in them, and prepared the soil. We decided what kinds of flowers we wanted to raise and then found out what kind of soil preparation is best for each variety. Also we studied the blooming of flowers to find out which ones would give us the most blossoms before school was out in June and which combination of plants would give us flowers from early spring until June. Boys and girls took turns at different phases of the planting and cultivating. During the spring we were able to share our flowers with all the other rooms of the school.

15. *Teachers' Aides.* Many of the boys and girls of our upper-elementary classes "teach" in the lower grades. In the kindergarten for example, three or four fifth-grade boys and girls may come to read to boys and girls of the kindergarten when they arrive at school, or have lunch with them, or show them how to handle hammers and saws, or how to sew. Two things are accomplished: The older boys and girls really help out with a large kindergarten, and they learn to get along better with younger children.

16. *Business Managers.* The upper grades handle various business enterprises in our school. For example the sixth grade operates a movie theater at noontime on rainy days. They attend to all matters connected with booking, receiving, and returning films, selling tickets, cashiering, etc.

The seventh grade operates the school supply store. They visit various wholesale houses in the town and open charge accounts with them. Then they place orders and keep their store stocked. All stock records and all

money records are kept by various committees of the class. Anyone who wishes may wait on customers. A great deal of practical arithmetic centers around this enterprise. The class' usual profit is around \$100 a year. This goes into the special school fund.

But handling the school supply store is only preparation for running the cafeteria. This job is done by the eighth grade, which attends to all matters connected with ordering, pricing, collecting, banking, record-keeping, and writing checks. In other words everything except cooking and serving. Most of its arithmetic classwork centers around this project. Early in the year the pupils visit the bank with which they are going to do business and learn how to roll money, make out deposit slips, write checks, and check their monthly bank statements. In a usual year the children of the eighth grade handle upwards of \$12,000 in operating the cafeteria.

A series of graded business experiences like these makes for excellent training in personal competencies, responsibility, cooperativeness, and a knowledge and understanding of business operation.

17. *Knitting Afghans.* Our Junior Red Cross is knitting squares for two afghans to be given to one of our local hospitals. A parent comes to the school every Friday afternoon to give instruction in knitting and sewing the squares together. Both boys and girls are participating. They block the finished squares and sew them together. Mittens, sweaters, scarfs, hats, and pocketbooks are also being made by the faster workers of the group.

18. *Homemade Kindergarten Equipment.* Children of our upper grades make jigsaw puzzles for our kindergarten children. They are made on three-ply wood with a large colorful picture pasted on. They are cut into four or five large pieces on an electric jigsaw.

Such puzzles seem easy but to kindergarten children they are a challenge to thought and judgment. They help to train eye and hand movements and judgment in color and line arrangement. Such experiences are very good preparation for reading.

19. *Letter Practice.* Everyone needs to know how to write letters that get results. When my elementary-school class was studying about our town they decided to arrange an exhibit of the things made here. But

since they had no money to buy the things it became necessary to write letters explaining what they were doing and soliciting the cooperation of various business officials. Correct spelling, good handwriting, brevity, and clarity were necessary in such letters, but most important was a letter which would sell the idea to the reader. The businesses of the town were divided among groups of pupils who wrote the letters as a group. Several versions were necessary sometimes before the final one was sent. A large percentage of the letters brought replies, some of them inviting the writers to come to the plant, inspect it, and take the donations for the exhibit away with them.

20. *Pupil Administrators.* Since I am a teaching principal I am not able to be in the school office all day. We have organized committees of pupils who take turns giving office help. They are very efficient at receiving telephone calls, greeting visitors, receiving milk payments, taking and filing attendance reports, and so on. The children have also planned nearly all of their clubs as service clubs. One of them, for example, is the School and Grounds Club and the members of this group really engage in worthwhile work in the building and around the grounds. (This club is especially useful since we have had difficulty securing and holding satisfactory custodians.) Then there is the School Activities Club, made up of upper-grade leaders, whose major responsibility is the supervision of Community Chest campaigns, Red Cross drives, corridor traffic, assemblies, and a lost and found-service.

21. *Milkmen.* The fifth grade has charge of ordering and distributing milk. A small rotating committee handles the various phases of the service. Every Friday a member of the committee visits each room to secure orders for the following week. On the basis of orders the school milk order is placed with the milk company for the following week. Members of the committee make milk lists for each room showing the number of bottles and who are to get them. A copy of this list is left at the door of the classroom with the milk on the first delivery Monday morning. Each morning during the week at about ten o'clock members of the committee distribute the milk to all the classrooms. At noon they collect empty bottles, see that they are clean, and place them in a case outside for collection next day. At the end of the week they collect for the milk, deposit

the money with the school account, and draw an order for payment to the milk company for the week's supply.

**22. *Perennial Landscape Gardening.*** Our sixth-grade teacher has a landscape-gardening unit in connection with the study of community planning. Each year the sixth-grade class studying this unit does a stint on the continuing landscape-gardening project which this teacher supervises on our school grounds. Sometimes the class lays out the general design of the project for one portion of the school grounds, the next year's class puts in the lawns and shrubs, the following year's class fills in the small plants and flowers, and when one portion of the grounds is done a class begins the design on another portion. And so on. A landscape architect who lives in our community has given his services in an advisory capacity from time to time. The community garden club also meets with the class and advises it on plantings. Each year's improvements are financed by candy sales and similar means.

**23. *Publicity Club.*** A committee of upper-grade pupils in our elementary school—the Publicity Club—made up of pupils who have exceptional talent in writing, regularly assists the school's teacher-staffed Publicity Committee in explaining the work of the school in material which goes to the local press and into the homes of parents.

#### JUNIOR AND SENIOR HIGH SCHOOL

**24. *Productive Shop.*** Our woodshop is devoted to making useful articles. Book ends, hat racks, and flower stands are strongly discouraged. Bookshelves have been made for various classrooms, as have easels and small reading tables. Advanced groups have been working on library tables, tables and chairs for the elementary school, teachers' desks, and similar equipment. Any teacher who wants an article that can be made of wood may place an order with the shop teacher who will turn it down only if it is too complex for the boys to make.

**25. *Taking Care of Children So That Mothers May Attend Meetings.*** Many mothers were not able to attend meetings at school because they had nobody at home to care for their younger children. The girls of the child-care class organized a playroom at the school to care for the little

children while the mothers attended the meetings. This gave the girls added experience in caring for children of different ages and was also a real service to both mothers and the school.

26. *Interior Decorating.* The girls in our home-arts classes do one practical job in interior decorating each year. They did all their own rooms first, then branched out to the rest of the school. For example they did over the room used for guidance conferences. Since this is a dark room a Mexican theme was used in draperies and accessories to brighten it up. The girls have their eye on other rooms in the school, and since there are many rooms in the school which need it they will have opportunities for practical experience for some time to come. Whenever they do a job they study the room carefully—its lighting, use, shape, etc. Then they plan color schemes, draperies, rugs, and accessories—all to make it more useful as well as more attractive. They set to work first cleaning windows, cleaning and painting walls, waxing (and sometimes refinishing) furniture, and arranging better lighting.

27. *Holiday Decorations.* Our interior-decorations class ran out of rooms to decorate, so we decided to decorate appropriately for each holiday season in the year our home-economics room, the teachers' room, and the cafeteria. Now through Thanksgiving, Christinas, and Easter we are supplied with much opportunity to exercise our decorating skills and insights.

28. *Poster Contractors.* The bane of an art teacher's life is the numerous requests for posters, signs, and placards. It is hard for people who are outside the field to realize that it is not always possible for an art teacher to use class time to accommodate those who want to advertise numerous school functions. To solve this problem a group of students in our high school organized themselves into a concern to contract for school posters. They call themselves and sign their work as the "Artsmen." These students come to the assignment box where all requests are deposited, select one of the new assignments, sign for it, and work on it during their free period in the art room. Over a period of time we have secured for their use such equipment as a large easel, an airbrush, a Cutawl machine for cutting out composition board, lettering brushes, etc.

Not all of the Artsmen are art majors but instead carry on a balanced

program including sequences in other fields. They are free to come and go in the art department as they see fit, often omitting their Artsmen work for an entire semester. Although they are primarily responsible for placards and posters, they quite often receive requests to do scenery for the operetta, cartooning, and other varied art jobs. So many desire to work with this group that a system of apprenticeship has been developed. The apprentices pledge work for six months under the direction of an older member. A committee decides on the merits of each pledge. The group works as a service organization to the school and at the end of two years of service a school letter is awarded.

29. *Getting on the Air Map.* To help pilots and inform air passengers of their location, our junior high school is cooperating with the Civil Aeronautics Authority by painting official air markings on the roof of the school. The mechanical-drawing students designed six-foot letters which the Air Scouts and Preflighters (two clubs in our school) painted in yellow on the flat roof. The code symbol pointing to the nearest airport is also included.

30. *Baby Sitters.* Because of the increasing need for responsible baby sitters, and because the work experience can be useful in the development of adolescent girls if the program is designed with this idea in mind, the home-economics department of the high school organized a baby sitters' bureau. Only girls who have taken or are taking courses in child care are eligible for enrollment in the bureau, and only girls who can demonstrate responsibility and good taste in caring out their assignments are kept on the roll.

The scheduling responsibilities are handled by a committee of girls who rotate each semester or each year. A single telephone number is published for patrons of the service to call. By arrangement with the telephone company this number may be rotated among the various members of the scheduling committee each month, so that no girl is overburdened with the duties involved. The schedule is so drawn up that each enrollee is committed months in advance to taking assignments on particular dates, so that there is no problem of securing a quota of sitters on particularly busy nights. A standard fee is charged and collected monthly by billings from the scheduling committee. Accounts are kept and sitters are likewise reimbursed at the end of the month, less a small

percentage deducted to defray telephone, mailing, and other expenses. A simple report form is mimeographed on a postal card; upon this form each patron is asked to report his satisfaction or dissatisfaction with the sitter.

Girls are urged to observe the homes into which they go. A great deal may be learned about decoration, family management, relations among family members, child development, and child care by the observant girl who takes these assignments *if* these factors are continually brought to her attention through discussion. No specific family is ever discussed in these sessions—only general principles are discussed and hypothetical cases from which girls may make application to particular situations in which they happen to serve.

31. *Junior Auxiliary Nursing Service.* The JANS, as we call it, is an organization which was originated by the students themselves. It is based on the idea of community service and is an excellent example of school-community cooperation. At the same time it is an excellent experience for the girls. The JANS is composed of 125 girls who have had basic first aid or a course in home nursing. A member of the JANS is distinguished by her blue jumper, white blouse, and cap which are given to her after twenty-five hours of service. Each member has the signed permission of a parent, who also agrees to take care of necessary minor expenses such as uniform, transportation, etc.

The girls make beds, carry trays, arrange flowers, and do many little things which make for the comfort of patients. They are spread among six hospitals in our vicinity. We have adopted a modified rotating system of service. About every two months girls are assigned to different hospitals. This seems to keep their interest alive; it also gives them a broader view of the whole field of nursing and hospital service than would be the case if they were confined to a single hospital.

In addition each girl takes responsibilities at home whenever anyone is sick and reports on her home-nursing activities. Members also work in the health office of the school during each period of the day instead of having study-hall assignments.

32. *Library Assistants.* Applications for positions of library assistant are taken at the beginning of each semester. Those accepted are asked to give at least three periods of their time each week—two of them for

scheduled work in the library, the third for a meeting of the group to learn library procedures, regulations, organization, and administration. Two points a semester are granted for the successful completion of the instruction program in connection with the library assistantship and a satisfactory rating on tasks performed during the scheduled work periods.

Several students have been recommended to the public library for employment on the basis of work done as student assistants in high school. Occasionally a pupil continues as a library assistant throughout the four years of high school. The usual plan, however, is for work of two or three semesters to be followed by some other type of work activity.

33. *Technicians Club.* The Technicians Club cares for and operates all visual-aid equipment in our school. Motion-picture projectors, film and slide projectors, opaque projectors, and other equipment together with films are transported to classrooms on the day and at the time a showing is desired. The equipment is set up and the showing completed—all by members of this club. Teachers make requests for showings to a member of the club who is always on duty in the visual-aids department. This member writes the request into the master schedule posted in the visual-aids office. Members of the club who are scheduled for projection work at any period study this schedule and carry out their part of the assignment. Equipment is usually moved to a room at the close of the period just before the period in which it is to be used. The next period crew comes to the room to put on the showing.

Members of the Technicians Club also set up and operate all lighting facilities for assemblies, plays, and special programs, they are in charge of equipment for evening dances. They also go outside the school to perform similar duties in the community in the evening. They care for and operate the public-address system, sound-recording equipment, and the scoreboards at athletic events. They take care of all stage work for stage presentations in the high school, including installation of scenery, curtains, special properties, etc. All these activities may be scheduled in a manner similar to that described for visual aids.

Although members of the club take care of administrative detail in connection with their operations, the club is under the cosponsorship of two faculty members who have helped them set up the plans and who evaluate the work of club members.

34. *Adviser Aides.* An important part of our guidance program is the staff of students who are adviser aides. These students serve as messengers, secretaries, and assistants to the faculty members who are serving as grade advisers to the students of the school.

The girls do secretarial work for the teachers to whom they are assigned. They gradually assume the full responsibility for making appointments, keeping the records of the dates of interviews, sorting and alphabetizing cards, and acting as receptionists. Some of them do considerable work in tabulating data. The boys serve mainly as messengers, bringing students to be interviewed or looking up students when they are not in their accustomed places.

The work of an adviser aide is highly confidential. Frequent meetings of the group emphasize this fact. It is a very democratically selected group. There are boys and girls; white, Negro, and Chinese; honor students, those of average ability, and sometimes even failing students; there are natural leaders and some who are so shy and retiring that they are not even good followers. This group is carefully selected from those sincere and honest pupils upon whom trust and responsibility can be placed. If a student has shown a willingness to work and seems to have an appreciation of the meaning of confidence, he is selected if it is apparent that the experience will be of value to him. Students consider it an honor to be asked to be an adviser aide. The shy and retiring student with little confidence in his own ability, who may even be failing a subject, discovers that he has real ability when he is placed in a position where some one depends upon him.

35. *Double Duty for Homemaking Facilities.* Because of its homelike atmosphere and cooking facilities the home-economics building is an ideal service center for school and community groups. The girls enrolled in the home-economics courses have varied opportunities for applying their classroom training when they prepare and serve luncheons and dinners to various groups.

The faculty holds its regular meetings there, as does the student council. One evening each month is set aside for the boys' Hi-Y dinner meeting, and from time to time civic clubs, such as Rotary and Kiwanis, meet at the building for special social functions. Christmas parties for preschool tots, faculty parties, and various other school and community social events round out a busy program for the future homemakers.

36. *Producing and Selling.* One year we became very interested in making articles from oilcloth in art class. The mothers were interested because of the utility value and beauty of these articles. We used flowers and seed pods in the fall from which to develop designs and stencils. We used enamel paint to paint the articles. We made doilies, buffet sets, stuffed toys, scarves, baby bibs, cushions, door stops, comb and brush cases, table mats, needle books, etc. Near Christmas we ran a gift store in the evening and sold the articles. The schoolroom looked like a five and ten store. The children met the public and transacted the business. New books for our room-library were purchased with the proceeds. We have also done a similar business with braided rugs, woven goods, and sewing.

#### SENIOR HIGH SCHOOL

37. *Student Stenographers for Teachers.* Senior stenography students who sign up for the experience are given credit taking dictation and doing typing for classroom teachers to whom they are assigned. Before undertaking this experience the students are rehearsed in the ethics of their profession regarding the confidential nature of what they do, reliability, punctuality, etc. In the same way teachers who agree to receive this service are brought together in a meeting at which employer ethics are discussed. Teachers are asked to maintain toward their student stenographers a standard type of employer relation so that the students will receive real training and know what to expect in the business world.

In order that each student's experience will be broad and cover the various types of work which he would be expected to do in business, the commercial teacher gives each of the teachers a list of the types of work that must be completed during the year: tabulations, reports of all kinds, straight copy work, carbons, manuscript copy, outlines, dictation, etc. The assigned teacher is responsible for seeing that the practice work of the student is kept properly balanced. Typing work is done by the pupil in the regular typing class.

38. *Dress Design.* Capable juniors and seniors in our dress-design classes are allowed to spend time ordinarily assigned to class practice work in actual work in the business world. They do this work under the supervision of their class teacher. They are paid for it. Some of these students are doing alteration work in dress shops, while others are work-

ing as dressmakers' assistants. Some are even doing custom tailoring, and many are doing fitting, alteration, and making special orders. They make children's suits, skirts, slacks, overalls, smocks, and so on. They work from 8:00 A.M. to 12:00 every day except on days on which they attend the dress-design class. At this time the work is arranged to help individuals with whatever problems they have encountered in the course of the week downtown. They have their major subjects in the afternoon at school and return to work from 4:00 to 6:00 P.M. downtown, except for those afternoons when they have extracurricular activities.

39. *Clerical Work Experience.* We place the seniors in our commercial department into cooperative work-and-study positions. Their schedules are all arranged so that they finish their schoolwork at 1:30 P.M. and spend the remainder of the day in offices. They are placed through the central employment bureau in positions related to their training in school—stenography, bookkeeping, and retailing positions. A follow-up arrangement with the employment bureau ensures continued reports on their progress at work, and students are given credit toward their school graduation in addition to the regular pay which they receive.

40. *Commercial Art.* Our home-arts teacher has made an arrangement with local stores which provides students with an unusual type of work experience. Students of costume design often get commissions from these stores to do sketches for newspaper advertising layouts. Ours is a small town without commercial artists. Advertisements run in the local paper usually are illustrated by cuts supplied from the outside. They seldom reflect either the personality of the local store or the particular dresses which they have for sale. Therefore this arrangement not only gives the girls experience in making sketches for real use but enables the store to make a distinctive appeal in its advertising.

41. *Student Store.* Our student shop is a cooperative store run in conjunction with our local merchants. The store is located on the ground level of our building and is easily accessible from the outside. Our classroom is located next to the shop.

The student shop was constructed by students in our shop classes. It contains two store windows of colonial type facing the outside of the building. The interior has venetian blinds, ten sections of adjustable and

removable shelving, a six-drawer National Cash Register, a sales-slip machine, an electric adding machine, perpetual inventory, files, and a telephone. The floor is of inlaid linoleum.

Window displays are arranged by a combination of art and sales-department students. They receive special help occasionally from local display men from the downtown stores represented in our student shop. Our art students also make all our show cards and help in school advertising.

Our personnel for the shop is made up of students from distributive occupation courses, art, and bookkeeping classes. All students work during their study periods on a rotating schedule. The shop is open at 9:00 A.M. and closes about a half hour after school. In order to qualify for a student-shop position a student must advance on his merits from the retail selling class. He then advances through the positions of stock clerk, sales person, department buyer, assistant general manager, and finally to general manager.

**42. Homework Experience.** Each senior-high girl in the vocational homemaking course does ninety hours of home-project work each year. She assumes responsibility for doing certain projects, such as refinishing of furniture. She sets up her objectives, plans her work carefully, and sets to work. She has regular conferences with the teacher. She keeps a careful record of money invested, time required, difficulties met and how solved, and a final evaluation of the finished project. During this time the teacher visits the home and guides the girl in her work.

**43. Local Banks.** We send each senior commercial student to a local bank for a week's experience. Students are excused from school the whole week and have bankers' hours for that week. The students have enjoyed this experience and found it quite valuable, and the bank gets a chance to look the field over for prospective employees.

**44. Teaching Mimeograph and Mimeoscope.** To teach the students how to use the mimeograph and mimeoscope I have them design things which they can use personally. For example during December I have them plan Christmas cards with many colored inks so that they can send them to their friends. At other times they make writing paper with their

initials or a design using colored inks. This requires great precision, the use of all the parts of the machine, and accuracy in setting up stencils.

**45. Commercial Work Experience.** To cooperate with local business firms which are in need of secretaries, bookkeepers, or clerical workers, we permit our senior commercial students to work two complete days a week. In this way they get actual office experience and are ready to take over the full-time jobs after graduation. They come to class the first three days of the week and work the next three, providing the firm has Saturday work. Each pupil must have a suitable grade in every class to be permitted to work part time; then he must keep that average up to standard in order to keep his job.

## Practice 6: LABORATORY METHODS

*Teaching by Laboratory Methods Which Stress Active Experience with Apparatus, Equipment, and the Tools and Mechanics of Organized Arts and Sciences*

### *Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b.* Uncover and develop many different kinds of special talents in individual pupils.
- c.* Guide pupils in learning to think.
- d.* Develop good citizenship.
- e.* Develop attitudes and habits of good health and safety.

A LABORATORY is, literally, a workroom—a place to labor. The teachers of the physical sciences were among the first to see that a workroom is necessary in teaching. They did a good job of promoting the importance of the laboratory method so that today the biology lab and the chemistry lab are standard fixtures in any high school. More recently we have heard of social-studies laboratories, mathematics laboratories, even the English workroom. These innovations will become more general as the laboratory method becomes more and more a primary teaching procedure in these other fields. No one would look at a biology laboratory and mistake it for an English room. But he might look at an English room and mistake it for a social-studies room, or a room where mathematics is taught. Why? Because different as these subjects may be, there is not yet generally a characteristic method of teaching these typical “recitation-type” subjects

that makes the place where they are taught of much consequence, except in the best of schools.

*Pupils need to master the tools and skills of the subjects they study* as much as they need to know the bare facts. If social studies has its special tools and skills, its special types of data, then pupils need practice in mastering these. If mathematics has its special techniques then pupils need practice in them. If English literature and creative writing, if art and art appreciation, if health and sound health habits—if all these and many others require certain skills and insights, then pupils need the kind of practice—abundant practice—that will enable them to acquire them.

*Pupils need practice.* This is the main principle underlying the soundness of laboratory methods. Pupils need to live the history they study, practice the citizenship they talk about, write letters in order to learn letter-writing, make maps if they are going to understand maps, actually brush their teeth in order to form the habit, actually vote in order to learn to vote, and so on, with every useful action which we try to teach pupils in schools.

*Laboratory methods do not depend upon real-life activities—they are the reasonably accurate facsimiles.* There is much vicarious experience in using laboratory methods, as in an imaginary trip to Mexico taken by a class. Though they take this “trip” only by picture, map study, discussion, looking up timetables, etc., they have to make many of the same decisions that would be made on a real trip. And so they get practice. As in any laboratory—chemistry lab, school shop, home-economics kitchen—the pupils are asked to enter into the spirit of the thing, to go through certain motions that are not the real thing but very close to it. The use of laboratory methods, then, differs from the use of *productive experiences* in the quality of lifelikeness. Productive experiences *are* life; the jobs are real; something useful has been produced. Laboratory methods are just *like* life; no useful product has resulted—except in the minds and spirits and hands of the participants. But that, of course, is important. There isn’t time in school, with our present state of know-how, to teach *everything* in relation to its real-life usefulness; to learn every skill, every fact, every attitude in connection with a job that pays off in a useful product. Hence the laboratory.

*The laboratory method borrows aspects of real life and adapts them specifically for pupil practice.* To give pupils practice in managing the affairs of government would be complex and difficult by any other

method. We borrow the great institution of democratic government and modify it so that pupils may practice it in the school. We borrow the agencies of government—elections, police, courts, legislature, administration—and modify them into citizenship laboratories in the school. We do the same with many other agencies of adult life—the newspaper, the radio, the store, the post office, to name a few—we bring them into the school in modified form as laboratories. It would be difficult to give pupils practice in managing the agencies of adult life by some other means.

*The whole school is a laboratory.* To learn citizenship, to become adjusted to social living, to become adjusted to one's capacities, to understand others, to learn the usefulness of facts and skills, to develop desirable habits of health and manners—to do these things pupils need practice. In this sense every school may be looked upon as a laboratory. Some schools have become much richer laboratories than others—better equipped with facilities for pupil practice. Yet all schools have basically the same opportunity.

*Any classroom can be a laboratory.* Any teacher can teach arithmetic and use laboratory methods to a great extent. Any teacher can use laboratory methods in studying the community, in geography, in business education, in teaching languages, in English, in music, in health. The job is easier in a room that is well equipped, with an ample library, flexible furniture, apparatus peculiar to the subject, and so on. But the most important piece of furniture is a teacher who is resourceful, imaginative, and willing to borrow from his peers.

### SAMPLE PRACTICES

The sample practices are listed under the following headings:

1. Early Grades
2. Middle Grades and Junior High School
3. Junior and Senior High School
4. Senior High School

### EARLY GRADES

1. *Home and School.* The center of interest in our first grade is home and school. I ask the children to make pictures of their homes. Then we talk about the street numbers on their houses. We put these on the draw-

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. A person learns only by his own activity. He learns what he does; he gains insight as he learns to organize what he does. Within certain limits the more extensive a learner's activity the greater will be his learning.

2. Abundant, realistic practice contributes to learning. Two key words here are *abundant, realistic*. Learners need much practice in the many intellectual, creative, and social acts which we want them to master. The realism of the laboratory is what keeps such practice from being mere repetition or drill and makes it varied practice under varying conditions.

3. What a person learns is influenced directly by his surroundings. (See Reason 2, Practice 1.)

### SOCIETY SAYS:

4. The school is a simplified version of society. That is why we choose the salient aspects of society and introduce them into the school, to make a laboratory in which pupils may practice the cultural, intellectual, and social acts which go to make up our society.

## SAMPLE PRACTICES (Continued)

ings. We talk about the streets their houses are on. We show the streets on the drawings and write the names of the streets there. Later we make a community poster showing the children's homes, streets, and numbers. Each child learns to write the street name and number for his house and writes it on the poster. Finally they are able to write their full addresses.

2. *Making Our Own Pre-primer.* One of the most successful experience-reading activities we ever engaged in was one we had on safety. It was so extensive that we built up out of our daily activities a series of stories which amounted to our own pre-primer. It contained the kind of material which no commercial pre-primer can ever have—material which was highly personal, firsthand, and made out of an actually functioning children's vocabulary. We asked a policeman to come and talk on safety. He told us many things which were the basis for discussion for several days. These things we incorporated in our experience stories. We talked about many ways of getting hurt and how to avoid getting hurt. We discussed scissors, for example, and matches, and petting strange animals, and so on. And we made experience stories out of these. The page on the scissors contained a colored drawing of a child carrying scissors properly and the story with it said: "I carry scissors the right way." There was one story which said: "I do not pet strange animals." It had an appropriate picture of a dog about to bite. Other stories said: "I put the soap in the soap dish"; "I look both ways before I cross the street." All of these and many similar ones we bound together in our big "Safety Book," which we read ourselves and read to other classes which we invited in to hear us.

3. *First-grade Cooking.* Cooking is always a part of my first-grade unit on neighborhood stores. Children bring recipes from home. These are rendered in manuscript writing; children read them and we make a selection from among these recipes. We read the one we have selected to see what ingredients are needed. Then we find out how much money we need to get the ingredients. We get our money together to see if we have enough. Then we make a trip to the store. I prefer the self-service grocery for this—children can rummage on the shelves themselves and

find what they need. Following recipes gives good practice in reading to follow directions. Children also learn to use a clock and count minutes. We discuss the store we have been to, many children mentioning the many different things they saw. The culmination of our unit is a party; children prepare and serve the resulting cookery to their classmates. Here there is opportunity for learning how to be hosts and hostesses and how to be pleasant guests.

4. *First Aid for the First Grade.* When we study first aid in our first grade we read stories pertaining to the subject. Then we discuss the treatment for specific kinds of injuries, such as bruises, minor cuts, splinters, insect bites, nosebleed, choking, burns, and poisoning. As soon as the children have discussed these points sufficiently to know something about them, I produce two toy telephones. Then we act out situations calling for first aid. One child is a victim; the other is a doctor. Some one suggests what is to befall the victim; then he acts out his accident. He picks up the telephone and calls the "doctor." The victim describes his injury to the doctor, and the doctor must tell him how to treat the injury and why the treatment is given. The doctor is of course "on the spot." If he makes a mistake there are many alert listeners ready to tell him about it.

Here is an indication of the value of such practice in instilling an understanding of a subject like first aid: A first-grade boy came to me and said not long ago, "Do you see this big lump on my head? I put ice on it so it wouldn't swell so much. I bet it would have been a big one—without the ice. I was glad I knew just what to do because my mother is working and I had to take care of it myself."

5. *Building a Home.* The children of my first grade were largely of foreign parentage; 80 per cent of the children spoke a language other than English—Italian, Polish, Norwegian, German, Spanish, or Greek. It occurred to me that most of these children—although they spoke understandable English in the classroom—were really thinking in a foreign language. It was clear to me that this experience in the first grade was their first real contact with America as most of us know it, for many of them were governed by patterns of behavior in the home foreign to America and to each other. A visit into their homes proved to me that this was true. So far as the children were concerned they were living

on foreign soil because the manner of living, the thoughts, and the language of our classroom were all foreign to them.

I decided to give them something concrete to serve as an American background. We built an American home right in our classroom. Lumber for it came largely from twenty-seven orange crates. We built it big enough for the children to go into. It took us several months to build this house during our work time in the morning, but the results were lovely to look at and very real to the children. We decorated it like a typical American house with white shingles, green shutters, and red geraniums at the window. We furnished it as best we could with typical American furnishings: drapes at the window, tables, chairs, rugs, and a bed.

We talked about manners and behavior in the home all during the time we were building it. And then we proceeded to live what we had talked about. It was hard at first to get them started, but in time the results went far beyond my expectations. Health habits improved, manners and language patterns improved, and pupils began to read.

6. *Counting.* In primary grades I use incidents in the daily experiences of the children to make numbers meaningful. We carry out such enterprises as the following: counting boys present at school, counting girls present, counting *all* present; counting boys absent, counting girls absent, counting all absent; counting all who are members of our class—present and absent; counting the number of cups needed for children taking vitamin pills; counting the number of papers for each table of children; counting the number of pencils needed; counting the number of candles on a birthday cake; counting the number of *skins* needed for a party; and so on.

It is not unusual for some children to grasp the meaning of addition and subtraction from such activities, and all children are strengthened in their conception of numbers and become more and more at home with them.

Later on we write down our findings and in addition record such data as weight and height of various children, temperature reading, date of the month, and so on.

7. *Play Store.* In learning to make change we set up a grocery store in the schoolroom, used orange crates for shelves, made "play money." We brought in empty cartons and cans for our grocery materials, sold articles,

made change. I taught regional geography by reading cartons and cans; we studied where the products were made and why they were made in that particular place. Every child had an opportunity to be storekeeper.

8. *Primary Dental Program.* Young children are interested in the manipulative approach to learning. Brushing teeth is really fun. I have secured several models of teeth—large models that I got through the help of our local dentists. I have some small hand mirrors. Primary children are greatly intrigued with examining these models and comparing their own teeth with them. We have practice sessions of toothbrushing and each child has learned to locate each of his teeth with the toothbrush and brush it the requisite number of times.

9. *Schoolroom Toothbrushes.* Constant discussion of the importance of using the toothbrush doesn't often get results. Witness the fact that children's tooth care always deteriorates over the summer. Toothbrushing is a habit, and habits are learned through practice. The feel of the mouth after brushing becomes habitual if brushing is practiced long enough, so that one does not feel right without doing it. Consequently I arranged to have every child bring a new toothbrush to school early in the year. We labeled our toothbrushes, arranged a place to hang them in the cloakroom, and spent some time discussing the sanitary care of toothbrushes. Now, every day during seatwork period after lunch the children go in order and brush their teeth. A chart on the wall arranged as a calendar has places for each child to check opposite his name after he has finished the brushing.

10. *Second-grade Post Office Handles School Mail.* My second grade built a post office in the hall just outside our room. The postmaster we chose because of his ability to make change; he was given an assistant whose job was to learn to make change. As soon as he could discharge the duties of the office he became the postmaster with an assistant. And so on. In our post office we sold real stamps. All school mail went through this post office. We provided letter drops for local and out-of-town mail. Parents often brought or sent letters to be mailed through our post office. The regular postman from our community post office picked up the mail. The children learned to read the names of many cities and all the states of the United States.

11. *Community Model.* Our third grade made a model of our community. In planning our project we took a trip around the community, visiting the park and the shopping district. In discussing our trip we divided the job up among various members of the class. Each child took a portion of the model for which to be responsible. We included stores, churches, library, park, school, homes, railroad station, post office, telephone company, bank, and so on. Buildings were made of cartons and boxes with windows painted on. Trees and bushes with crepe-paper foliage were made from branches put in a clay base. Lampposts and street signs were made of wood. Lampposts were equipped with small (flashlight type) bulbs and connected by wires to the power plant. (The janitor and the principal gave us help on this.) At the beginning two dry cells were used for power. Later a child brought in a transformer from his electric train equipment. The model took up the end of the classroom and measured twelve by eighteen feet. It was mounted on wallboard which had been painted to show streets, blocks, etc.

The model gave us endless material for discussion of our community. Constructing it required several field trips to observe more closely the details of particular parts of the job. Children became interested in the sources of supply for the gas, electricity, and water which they used in their homes. The whole project drew them together as a group more than anything which we had done previously (they were a somewhat immature and individualistic group at the beginning) and much reading and writing grew out of their interest in the project.

12. *Early to Bed.* Our discussion of good health habits in the third grade centered for a time around the problem of getting to bed and getting enough sleep. The problem was exemplified by one of the pupils who was frequently tardy and who explained that he couldn't get up on time and always felt tired in the morning. We decided that a good approach to the problem for each boy and girl would be to have a daily schedule, leaving enough time for sleep. We talked about good daily habits and listed some of the suggestions which came out of discussion. We consulted our books for suggestions. Then, to make the principles of good daily habits real to himself, each pupil agreed to prepare a schedule for himself and follow it for a time. Each boy and girl put down a bed-time and a rising time which allowed enough sleep for one of his age and then carried the plan around the clock. We found a great similarity

in the plans, so we decided to illustrate the phases in a third-grader's day and made a frieze to put around the room. Mothers reported that the children were putting their plans into effect at home and going to bed on their own initiative at the proper time. The boy who had been tardy so often has not been tardy since the project was initiated.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

13. *Stage Money and Stage Food.* During our discussion of health and nutrition in the fourth grade we carried on a little laboratory experiment in choosing a proper diet. We cut out and pasted on cardboard a number of pictures of foods of many different kinds: soups, juices, vegetables, meats, bread, cereal, fruits, sweets, etc. Prevailing prices were labeled on the items. Then they were lined up on the chalk rail. Each child was given some play money and went down the "cafeteria" line selecting what he considered to be a well-balanced and healthful meal to meet his pocket-book. A cashier took the money and gave the correct change. (Everyone had a chance to be cashier at one time or another.) Then each child brought his purchases back to his seat and during discussion explained what he had bought and why he thought it was a healthful thing for him to buy.

14. *Cold Control.* In the regular life of the school many situations come up that can be used to instill through practice the things we learn in words from books. Take colds, for example. The pupils of my fifth grade had learned about Vitamin C and its presence in fresh fruit. They had studied about germ transmission. And they knew that it was bad to sit around in wet shoes and stockings; but as every mother knows, children can easily forget about these things when the time comes to put the knowledge to practice.

We not only studied these things, but we put the knowledge to practice during the season when colds are prevalent. Every child brings at least one piece of fresh fruit to class, and we hold a mid-morning feast to help build up resistance. We have banned handkerchiefs; every child has a generous supply of disposable tissues for blowing his nose. And I have arranged with parents to have an extra pair of stockings and an extra pair of shoes always in the school for each youngster. Any child who

comes in with wet feet changes immediately. He wears the apparel home, where it is washed and returned to school for the next time.

15. *Puppet Show.* For several weeks the presentation of a puppet show formed the central interest of our activities in arithmetic, language, arts, literature, and music. Every pupil in my fourth-grade class had a part. They made an original adaptation based on *Hansel and Gretel*. They made the scenery and stage properties, made and dressed the puppets, printed and sold the tickets for the performances. We were already fortunate in having in the school a puppet stage which had been made by a previous upper-grade class. Four performances were given, including one for the relatives and friends of the performers, one for specially invited guests from the school faculty and from the community, and two for pupils of the school. A crew of six manipulated the puppets. A corps of seven took the various voice parts. There were also stage managers, prop managers, lighting directors, ticket-takers, and ushers.

16. *Mapwork Lab.* Most children know every street and alley near their homes. When told that their community can be mapped as well as Alaska can, they become very much interested. We usually start the project by using a sand table. On this the children build a model of the community or neighborhood we have selected for mapping. When we begin placing every house and every important building in town on this sand-table model, pupils are surprised that they haven't been as observant as they thought. They find it necessary to go often to the actual place and find out how many houses are on a street, how close together they are, what size they are, and so on. When this job is done we use it as a basis for making a large relief map in color. We use the symbols on our map that are used by the professional cartographer.

This project serves to acquaint pupils with their own community. But especially it serves to give them skill in reading maps, an art which has to be learned as much as reading any kind of material. After making a map of a place familiar to them children find it easier to make and interpret maps of unfamiliar places.

17. *Laboratory Geography.* In preparation for an imaginary trip to Italy, the library corner was filled with reference books, the encyclopaedia, magazines, maps, charts, pictures, Tru-vu films, posters of steam-

ship lines, curios, etc. The aim was to develop a greater appreciation of travel and foreign life in general. The approach was made through a study of the steamship posters to gain a knowledge of conduct on ship-board. Public rooms, amusements, food, clothing, games, tipping, etc., were discussed. The itinerary having been outlined previously, the class proceeded to "visit" the places chosen. Historical shrines, museums, art galleries, as well as places of scenic beauty were "visited." During class periods each place studied was discussed. Children were encouraged to do research and report on findings. For instance during the visit to Mount Vesuvius the action of volcanoes was studied, and with the aid of pictures the ruins of old Pompeii were viewed. The clinching point of the unit was the writing of diaries, and each day as a place was visited a new page was added to the diary. Imaginations were permitted to run riot, and some excellent literary qualities appeared. The entire unit was successful enough to inspire several of the parents to visit Italy with their children, while others visited the classroom when the diaries were read.

18. *Arithmetic Lab.* One of the important considerations of living economically is buying wisely. Most students have a concept of buying things for their own use only, not the wider concept of buying for a family. To make the student realize what it means to shop for a family I organized a list of groceries that might be purchased for Thanksgiving. The students were instructed to bring the local paper containing advertisements of the various grocery stores. We compared the highest advertised price with the lowest for the twenty or thirty items listed. The comparison was made by tabulating the prices. The difference on a \$20 order resulting from shopping for the most reasonable price amounted to about \$3.75. The students were very much interested in making this experiment that showed that a wise shopper can save money.

19. *Sixth-grade Science Lab.* While working out a unit on electricity my sixth-grade group made a workbench of plywood and orange crates. Electromagnets, switches, telegraph keys, and electric motors were planned. Previous study showed them what materials they needed and the details of construction. I divided the class into four groups, and each group constructed a working model from the wire, tin, nails, corks, etc., that members of the group brought to class. Because of inadequate study several electromagnets were made with uncovered wire and would not

work. This difficulty was quickly remedied when by further study the students discovered the reason for their failure.

**20. Letters to Prominent People.** In a study of worthwhile Americans we selected one of the oldest living Americans who had made an outstanding contribution during his lifetime. We studied his life and his contribution to society. After we were familiar with his life each student prepared a letter to send to that individual, telling him the reasons for his selection by the class, congratulating him on his achievements, and extending best wishes. The letters were then read by a committee of the students, and those children who had written the best letters were rewarded by having their letters actually sent.

We have done this several times in my various sixth-grade classes. (Each time a different worthwhile American is studied.) And almost always their letters are acknowledged by letter, post card, a little gift, or a photograph, much to the delight of the children.

**21. Calorie Count.** We vitalized our study of vitamins and calories by making it personal. Each child calculated the number of calories he required per day, on the basis of his height, weight, and age. He then undertook to keep a record of all the foods he ate for a day. Using a standard reference table showing the number of calories in portions of various foods, he calculated what his calorie intake was for the day. We were surprised to discover that about half the class had not had enough calories. Each child then went to work on a daily menu of his favorite foods. We discussed these menus and balanced them for vitamins. Each child then made a chart by means of which he could keep a record of his food intake. The children showed a great deal of interest in recording their daily rations on this chart and keeping their meals balanced as to vitamin content, and adequate (but not too heavy) as to calorie content. The practice drew their attention to the subject of vitamins and calories; it provided a laboratory situation for the study of foods; and since we carried on the practice for a considerable length of time, it served to build habits of proper food intake.

**22. Dramatizing.** In the intermediate grades dramatic work presents one of the best opportunities for recognizing individual differences and for developing them along socially constructive lines. Since the play is

to represent the group's effort, each member earnestly desires its success, and a strong motive for learning has already been established. Every member may, and does, contribute to the production. Children gifted in art paint, construct, and arrange scenery. Girls skilled in handwork help with costumes. Boys who are liberally endowed with brawn act as scene-shifters. Shy pupils gain confidence by taking minor (or nonspeaking) roles. Children gifted with creative writing ability prepare the story and those whose leadership abilities are better developed are given the important job of drawing the production together and directing it. Discussion periods are held frequently so that all the ideas of the group may be drawn out.

Since this is a cooperative project requiring various skills and abilities, each child may feel that he has a worthy and useful part in the whole work despite any differences or handicaps. Dramatic projects of this type recognize individual differences in two ways: development of special abilities and correction of weaknesses.

Many teachers use art to serve their whole-group enterprises, and it is a splendid resource, though a somewhat more static one than dramatics. The great value of dramatics is that it encompasses not only art but music, writing, speech, and bodily movement.

**23. *Making Pioneer Products.*** The social-studies group in our one-room school set out to see how our ancestors lived and manufactured products. Each project was suited to the child's grade level. The old barrel stove came in handy. We made candles, butter, soap, leather, brick, woolen cloth, charcoal, coke, and paper. One boy shot a squirrel and tanned the hide. It took a lot of research and over two weeks to do it. But the leather is excellent. Another cut a miniature cord of wood (to scale) and made a coarse paper. The brick clay came from the same pit where the brick for our schoolhouse was burned. Wool was cut from one boy's pet sheep, washed, dyed, and twisted into yarn and woven. Reports were written on the steps in each process of production and were made into charts that contained samples of the finished product.

**24. *Citizenship Clubs.*** There are seven Junior American Citizen Clubs in our elementary school. Each club has a different committee appointed at each meeting to arrange for the next meeting. There is therefore great variety in the types of meetings. This helps to keep interest lively,

although the subject is always on some phase of good citizenship, expressed through poems, stories, telling about books, dramatizations, quiz programs, *et al.*

We also have a club, limited to upper-grade children, known as the Senator's Club. The senator's name, printed on oak tag, stands on his desk during the club meetings, which are held in the fashion of a deliberative assembly. Topics of the day, selected largely from editorials in the newspapers, are discussed. The meetings motivate an interest in radio news broadcasts, bring up family discussions of current events, and bring to notice various senators' opinions expressed in the newspapers.

At a recent meeting of the parents association the Senator's Club provided part of the program. They presented their own ideas of how their city might honor the heroes of the Second World War. They proposed a park with an auditorium for forum discussions, a swimming pool, a sports arena, an activity house for children and adults—all to be built on unoccupied meadow land.

25. *Fashion Show.* We used a fashion show and tea to capitalize on homemaking skills developed in our elementary-school classes. We planned a display of dresses, skirts, and other garments made in sewing classes. Foods classes made cookies and fruit punch. All classes wrote invitations to their parents inviting them to the showing. The girls wore their dresses and modeled them before the group, stopping a little to tell about the costume and how it was made, the pattern, kind of material, and cost.

26. *Imaginary Trips.* As an English and social-studies combination my pupils planned a trip to the West Coast. They wrote for maps to plan their routes. They wrote to the chambers of commerce in different cities to learn interesting facts about places en route. The pupils worked in committees to secure this information. A different route was planned by each committee. Also each committee planned the trip by a different means of transportation. One planned a trip by air, one by train, another by bus, and still another by automobile. We secured time schedules of bus, train, and air lines, and also secured automobile road maps. Each group had to plan a schedule of travel for its trip.

As its report each committee used maps, pictures, timetables, and other materials it had secured, as well as material from geography and

other reference books, to describe its "trip" to the rest of the class. The members discussed the geographical, social, economic, and scenic features of the cities and territory covered. We further enriched this unit by bringing in a number of travel films for the class to view to give them visual insights into the land they were studying.

*27. Table Conversation and Social Correspondence.* Conversation has been called a lost art. Perhaps so, but we use it more often than any other single skill. Therefore I try to do something about it. Our plan is an imitation of some social gathering such as a dinner. Pupils are grouped into a "social unit" of six or eight: a host, a hostess, a house guest, a guest of honor, and others chosen to form couples if possible. The group then meets in some corner of the room to settle on what type of social event it will enact. It may be a dinner party before the theatre, or a supper after a skiing party, or something else. All the members of the class are placed in some social group for this exercise, and all groups lay their preliminary plans together.

The class then meets as a whole and we consider the various topics of conversation which are appropriate under the circumstances of the various social events which have been decided upon. We list such subjects as general world situation, local developments, outstanding scientific developments, music—both classical and popular—radio and screen entertainment, literature, and sports. Each member of the class spends some time thinking about and collecting any data he can get on topics appropriate to his social event so that he will have enough material to be a good conversationalist.

Meanwhile the class is concentrating on social correspondence. The host and hostess are writing to the guests formal or semi-formal notes (whichever the event requires) inviting them to the party. Guests reply in kind.

On the day of the "dinner" or other event, one group performs at a time (for about twenty minutes), the others observing and at the end offering their criticisms. For a dinner we shove desks together to make a table. Chairs are placed around the table. A living room is also set up with whatever furniture we have available for the purpose. The host, hostess, and house guest begin the presentation, chatting in the living room before the guests arrive. The guests begin to arrive. Each is relieved of his wraps, introduced properly, and drawn into the conversa-

tion. Dinner is announced and the hostess leads the way to the dinner table. She sees properly to the seating of her guests. Once seated the hostess sees that the conversation continues in lively fashion, that it travels from guest to guest, and that all are included. The host also behaves similarly, directing conversation, including everyone in it, giving the guest of honor sufficient opportunity to talk about his favorite interest, and so on. Leaving the table is also a delicate art in which the hostess leads.

Each group puts on its presentation in turn. Besides training in conversation, the procedure also offers excellent practice in some of the social forms.

28. *United Nations Meeting.* As an outgrowth of its study of world citizenship, my junior-high-school class held a model United Nations meeting, patterned after those at Lake Success. The furniture in our classroom was moved around to approximate the circular shape of the meeting arrangements there. The topics of the conferences were those which were current among United Nations representatives at the time.

Delegates were selected in the following way: Each child chose the country he wished to represent. If more than one child selected the same country they drew lots for their choice. Those countries which no one wished to represent were chosen by lot by those children who remained unassigned.

Each delegate spent some time reading up on his country—natural resources, products, industrial and agricultural potential, wealth, population, climate, type of government, and so on; in addition, he studied the attitude of his government toward the different issues to be discussed by reading back issues of magazines and newspapers.

Delegates were seated alphabetically by countries, all had identification signs and flags of their countries, which they had made. The meeting lasted for several days. A class discussion afterward showed that a number had changed their opinions as a result of the experience and that still more pupils had a greater insight into some of the basic issues.

29. *Community Arithmetic Problems.* There are in any community many examples of arithmetic in real-life action. In ours, for example, we use taxation and the town budget for many of our arithmetic exercises. When the proposed budget is accepted and the tax rate set, we get a

copy of the assessment list and actually calculate the amount of tax that parents (or landlords) will have to pay on the property the children live in. We calculate percentages of the tax dollar budget for different town services. We attempt to tie this work up with social studies; we discuss what taxes are for and learn the many different kinds of taxes. A committee of our pupils interviews tax assessors to find out what principles are used in assessing property, and so on.

We use other types of calculation which are similar: We secure actual invoices from our school office and from local stores in calculating discounts. We get some actual insurance policies in calculating insurance premiums. We calculate the prices of articles advertised in the papers at 10 per cent or 15 per cent off. We calculate the amount of federal tax on advertisements of jewelry, furs, and cosmetics. We calculate the real-estate agent's commission on sales of real estate reported in the paper.

30. *Safety Survey.* Following our study of home safety, my seventh-grade pupils undertook to make an inspection of their homes. They listed all the fire hazards and all the safety hazards which they found. Each pupil brought his list to class. The class divided into groups to consider the individual reports of the members. In their discussions the groups decided what should be done to remedy each hazardous situation. These suggestions were carried out at home wherever possible, and group representatives made a report of accomplishments.

31. *School-board Elections.* In studying our local government our seventh-grade class decided that the qualifications of all candidates for office should be carefully studied by every voter. One pupil mentioned that there was to be a school-board election soon. We learned the names of the candidates, but we did not know anything about their qualifications and platforms. The same pupil told us that the League of Women Voters was holding a meeting the purpose of which was to give each candidate an opportunity to state his platform and give the voters a chance to hear him. A question period was to follow.

Our class wanted to send representatives. We elected four to represent us at the meeting, and from their notes the class learned of each candidate's platform. On the board we wrote the salient points made by each candidate under the candidate's name.

The children concluded that it was the duty of every American citizen

to vote. Many reported that their parents did not even know that they could vote for a school-board member. Although we carefully refrained from picking any candidate we did discuss the merits of each plank in each candidate's platform, and we carried on such a lively discussion that the children continued it around their dinner tables and, in many instances, interested their parents in voting.

### JUNIOR AND SENIOR HIGH SCHOOL

32. *Home-economics Homework.* We expect a great deal of our teaching in home economics to be immediately effective in each girl's home. To determine the extent to which this is true we send a cooking check sheet home each semester. The girl and her mother together fill out this cooking check sheet, but it has no effect whatsoever on the girl's grade. The purpose is to find out how many of the recipes from school foods classes are being used at home and to what extent the girl is assisting in homemaking activities. We view the opportunities at home as furnishing a very excellent supplementary laboratory for the girl to work in. We consequently mimeograph all recipes and, after they have been used, have the girls take them home and keep them in a home notebook; from this collection the girls choose a few each month to prepare and serve at home.

33. *Nomination of Officers.* Class, club, and school elections are all held on the same day. Nomination procedure is as follows: For class officers petitions of candidacy containing forty signatures of class members must be filed in the student-government office by a certain time and date. The election board of the student-government organization then checks these petitions to see if they are valid. Any member of the class may sign one petition of candidacy for each class office. Duplicate signatures are voided on both petitions. Election of class officers takes place on election day from 8:30 to 9:00 A.M. in each homeroom under the direction of a representative of the student-government organization. A ballot for each member of a homeroom is distributed by the representative and collected by him at 9:00. All ballots are counted by the election board.

The nomination of club officers takes place in this manner: By Wednesday of the week preceding election day, all school clubs must hand to

the student-government organization a list of offices which are to be filled and a list of members in good standing. Within the next week the eligibility of club members to vote is checked. A master ballot containing the nominations of officers for all school clubs is compiled and posted in every homeroom.

During the next week petitions of candidacy (with required numbers of signatures depending upon the total club membership) are received by the student-government organization and eligibility of the signatures checked.

Student-organization nominations and elections follow the same procedure. After the elections the election board counts the votes for all offices and posts returns.

Election day is early in May. Since all club, class, and school officers are elected in the spring by those who know their qualifications, these officers are ready for work and the organizations proceed to operate as soon as school opens in the fall.

34. *Student-government Elections.* When officers are elected to our school organizations the procedure is modeled as closely as possible on election procedures in our state. Parties with significant names are set up. Those who desire to have their names appear on the primary ballot must present petitions signed by a certain number of voters. In order to vote on primary day a student must have previously registered. Voting districts are established by designating certain rooms as voting and registration places. After nominations have been determined by direct primary voting, a similar procedure is followed on election day with printed ballots and tally sheets. Campaigns are carried on by candidates and their supporters, including placards, campaign literature, and speeches. Pupils hear the returns from the voting districts as messengers bring results to the auditorium, where they are tabulated on a big board as they come in.

35. *Political Campaign.* For two weeks preceding our school elections the student candidates and their managers held their campaigns. In the first phase of the campaign corridors and classrooms were spotted with campaign posters. These were made by art students who were associated with the respective parties; they had been planned and were approved by the political committee of each party. Badges and buttons were distributed. Brief addresses over the school public-address system occurred

each morning. During the second phase candidates campaigned in each classroom during the homeroom period, presenting their platform and discussing voters' questions. Musical parades were held on the school grounds, winding up with candidates speaking from a bunting-draped platform. The climax to the campaign came with a big auditorium rally with band music, cheering, and speaking by the candidates.

36. *Student Jury.* A district judge who has been extremely helpful to the schools and very cooperative in his attitude toward education agreed to help vitalize the work of our social-studies classes when they were studying the organization and work of our courts. He impanelled a student jury from these classes and reserved space in the courtroom so that they could come to a trial and hear the evidence and the other proceedings at the same time as the official jury. A room in the courthouse was set aside for them to meet in and there they arrived at a verdict from the evidence they had heard. Afterward the judge discussed the case with them.

37. *Family Tree.* Before beginning the study of Europe I always have the members of my social-studies class trace their ancestry, drawing a simple family tree at least three generations back. Information for such a project can easily be secured by pupils from their fathers and mothers. They include the given name and family name and nationality of each person listed on the family tree. Often a child has never even known his mother's maiden name before this project; many children have never known the family names of all their ancestors to three generations back. There is usually great interest generated in this project. Many children are surprised to learn of the many countries of origin represented in themselves. In our initial studies each child proceeds to learn about the country or countries from which some of his ancestors came. He makes a booklet on each country, compiling information gathered from various sources—books, pictures, periodicals, stories his parents tell him, interviews with local citizens of the same nationality, and so on.

38. *Spending Money.* In order to exemplify the principles of earning, spending, saving, and getting the most for money—principles which we were studying in our class in consumer education—each girl was asked to keep a personal expense account. This practice objectified our study

of categories of expenditure, and many erroneous ideas of money were corrected. In our study of the family income and planning expenditures for a girl's wardrobe, each girl took an inventory of clothes she had on hand that were wearable. We found some articles that were made of very durable materials which could be restyled. We examined others and discovered possibilities of renovation. Each girl then planned the renovation and restyling of these articles, calculated the savings, and applied the results to our study of family budgeting and buying.

39. *Home-nursing Course.* Laboratory work in our home-nursing course is carried on largely outside the school. This is a course for girls taught by a registered nurse. Girls learn how to determine certain diseases from their symptoms, how to take a temperature, how to make a hospital bed, how to change a bed with a patient in it, how to bathe a patient while he is in bed, how to take a pulse, how to keep a chart for a doctor, and how to handle a patient while administering medicine or medical treatment. Also they study infant care and prenatal care of mothers. Each girl undertakes an outside activity that will put some of these learnings to the test. She undertakes to nurse a sick person at home or observes the care of a new baby. In the latter case she keeps a chart on the infant's progress. The chart forms the basis for classroom discussion of good points and weak points in infant care. Whenever possible each student observes a prospective mother and is taught just what the proper prenatal care should be.

40. *Child-care Lab.* We use our kindergarten and nursery school as a laboratory in preparing seventh- and eighth-grade boys and girls for home management. Some schools have developed a similar practice for senior-high-school boys and girls, but the junior-high-school age is probably a better one for orientation, and by working with seventh and eighth grades we reach a number of children who might drop out before senior high school.

The boys and girls who have found the course specially useful are those who actually spend much of their spare time taking care of little children in their own families, or for other families, while the parents both work. The instructor of the seventh- and eighth-grade boys and girls is a person trained in early childhood development and nursery-school

techniques and is assisted by the various kindergarten and nursery-school teachers whose classes are used as laboratory groups.

Instruction follows as little as possible any formal or textbook method. At the beginning a discussion is held the primary purpose of which is to find out what questions or interests the boys and girls have with respect to young children. Discussions are also held with the parents of the boys and girls enrolled to find out also what they would like to have their children learn. As soon as possible the students are brought into the nursery school and kindergarten and begin helping. Physical care is of course one of the first things with which they are entrusted. Soon the students are supervising the little children in play, discovering which are suitable playthings, learning something about pictures and picture books to show them, and finding songs which they like to sing. Experience in these actual situations is reinforced through regular discussion periods held with the instructor and with the nursery-school and kindergarten teachers. As students become more practiced in observing little children they begin to raise questions like these: Why should some children have temper tantrums? Why do they crave attention? Why should some children be afraid of the dark and of strange people? Why should they have jealousies? And so on. Questions like these which the students raise form the basis for subsequent discussions and reading. Materials used for student reading are very flexible. Typical textbook material is not very suitable. Various pamphlets and magazine articles on child development and child care have proved to be most helpful.

#### SENIOR HIGH SCHOOL

41. *Grocery and Drygoods Store.* As a part of its training of distributive and commercial workers, the commercial department of our school sets up a student shop each year in one end of the school cafeteria. The store is a complete retail grocery during the first semester and goods are furnished by local stores. During the second semester the store is fitted out as a boys' and girls' furnishing shop. Pupils visit local merchants, make selections from their stock, arrange to have the goods shipped to the school, arrange the goods in the school store, make sales to the school children (and others who may come in to buy), make out sales slips and other sales records, keep books, and take inventory. Goods are secured on consignment from the local stores, sold at the same price as in

the stores from which they originated, and the sale price is turned back to the merchants. No competition with private enterprise exists in this project. All unsold goods are also returned.

**42. Job Report.** In vocational auto mechanics a job-report sheet is used. A job report is divided into five parts. (a) The heading—here you write your name, class, date of report, and type of job on which you worked. Specify the actual job that was worked on; if more than one operation was used list all operations. (b) Tools, equipment, and materials used. (c) What you did—tell briefly *what* you did on the job. Student should not tell *how* he did it. (d) Operating steps—tell how the job was done. List the operating steps in the order in which you did them to complete the job. (e) What you learned—discuss results of job, telling what you saw, new skills you learned, and information learned on the job. The job-report sheet is a valuable teaching aid as it requires the learner to live the job through again (mentally) after he has completed the job manually. The instructor has a better opportunity to correct and convey proper information to the student. These reports are also good reference material.

**43. Office Practice Lab.** In advanced work in typewriting and shorthand we teach office practice. The teacher then assumes the role of an employer and the pupils are employees. In one unit, for example, the students work for an insurance company and perform the duties they would be expected to do in a real insurance office. In another unit they work for a large department store; in still another for a manufacturing concern. Each office practice session is modified accordingly.

**44. Judging Newspaper Stories.** Finding it difficult to teach ninth-graders that newspaper and magazine articles are written by one person and subject to his biased opinion, I have demonstrated to pupils of this age why they should not accept without question what is read in current-events literature. First clip from the local paper a story of a hotly contested football game which most of the class has seen. Then get clippings from the opponent's home-town paper. Now take crucial points of the game and compare what each writer says about them, pointing out that frequently each is biased. Then use some important national or world problem in which the class is divided in opinion. Give the pupils enough

facts and have them write a news item (not one side of a debate) on this subject. Read these in class and point out how biased some articles are in spite of the fact that each pupil was supposed to write a news item only. With this experiment as a background it is much easier to show how difficult it is to keep one's own personal feelings out of one's writings.

45. *Election Lab.* In our social-studies classes we precede all regular elections—whether national, state, or local—with a study of political parties, campaign methods, election rules, and voting procedure. On election day (or just before) I go to the polling place and get enough sample ballots for every pupil. We then engage in a classroom election, with children voting on candidates which their elders are selecting on the same day. A regular election board has been chosen, and pupils vote exactly as if they were adults. Lists of eligible voters are furnished (the same as the class list) and each voter is checked by the election board and given a ballot. He carries the ballot into the private voting booth and marks it, depositing it in the ballot box. Later in the week a tabulation of our results is compared with the results of the actual election.

46. *City-government Lab.* In order to develop an understanding of our local government, each spring as part of our work in problems of democracy we conduct an election of local government officials. We go through all the processes of a regular election: registration of voters, petitions by candidates for office, party meetings, election campaigns, the primary, and general elections. After officials are elected civil service examinations are given for those aspiring for appointive positions. These student officials, both elected and appointed, then learn more about their jobs by interviewing and observing the regular city officials. As a climax to the entire project the city is turned over to these student officials for one day. On this day students fill all city offices, the council holds a meeting in the city council chambers, and in this meeting legislation is passed which is given to the regular city council for their consideration. This project makes possible much coordination with other subjects: art classes (making signs and posters for the campaigns), speech classes (preparing and giving campaign speeches in assembly and over the school public-address system). All seniors are eligible to participate in this project, even though some do not take the course in problems of democracy.

47. *Political Campaign.* Before the last presidential election, classes in problems of democracy presented an assembly program in which members held a political rally. Both of the major parties were represented by campaign managers, party platforms, speechmakers, etc. Campaign literature was distributed to members of the assembly audience, a small band recruited from the school band supplied music, and those taking part in the rally paraded into and from the auditorium.

48. *Student City Government.* Once each year the government of our town is placed in the hands of students who have been duly nominated and elected by the student body. Mayor, clerk, and councilmen are elected. Engineer, fire chief, police chief, and other officers are appointed. Each elected and appointed student official meets with his real counterpart for a day or more before taking office to learn something about the duties.

In electing the student officials the state law on city elections is followed. Each person running for office must file a regular petition with at least fifty student signatures. Posters, newspaper articles, banners, speeches, and all the other concomitants of a campaign are characteristic of student candidates' campaigns. A rally of the entire student body is held in the auditorium; the candidate presents his platform and answers questions from the audience. An election board of representatives from each party supervises the election. This board sets up election rules, designates voting precincts and places, runs the voting machines, and tabulates the results.

The elected officers then make their appointments and the next day begin their consultation with the town officials whom they are to replace for a day. This program has been made possible through the cooperation of the mayor, the Y.M.C.A., and several of the local civic clubs.

49. *Dramatizing Law Problems.* In my business-law class I have the pupils act out the various problems which are presented at the end of each chapter of our textbook. I find that this method provides a more realistic experience and a greater understanding of the legal principles involved than does a mere recitation on the problems. We divide the problems among various committees who then plan the various presentations. The classroom is arranged in the form of a court and each case is put on. The pupils make up their own lines and actions, frequently add-

ing dialogue and business on the spur of the moment. Each group puts a lot of effort into making the rest of the class understand the law principle involved. From the sketch presented in the book they build up a whole story which is presented through word and action in the court, each pupil playing a part. Instead of having the teacher give the decision, one of the students serves as judge.

50. *Foreign-language Method.* We never start with a study of grammar in our Spanish class. We begin with oral conversation, then take up simple reading—still reinforced with conversation. (Note: This is not unlike the methods of teaching English reading in the first grade.) When the students have become familiar with the forms through use or have asked about the difference in form of a verb, for example, which means the same thing though differing in person or tense, they may be asked to classify or formulate some of the differences and similarities which make up grammar. No translation from Spanish to English is done. Reading in Spanish is used as a basis for class discussion in Spanish.

51. *Language Lab.* We have established a language laboratory in a room of the high school where facilities are available to groups and individuals studying foreign languages. We have a recording and playback machine used to help individuals achieve better oral and aural fluency in foreign languages. Also available are foreign language recordings. Another aid for motivating language study is the monthly scheduling of selected foreign movies in Spanish and French.

52. *Play Lab.* We have a dramatics laboratory in which groups of high-school pupils prepare plays for presentation in our English classes. The laboratory is nothing more than a wide dead-end corridor, adjacent to the English room. It is equipped with a small stage—as is the English room—curtains, and other dramatic fixings dear to youngsters of high-school age. We call it the “Little Theatre.” Thirty to thirty-five pupils alternate in groups of five or six to prepare their productions under the direction of student chairmen. Each person is free to interpret his part in any manner the group considers sincere and in character. In this way we dramatize many sections of the plays we study, many of the stories, and selections from many of the novels we read in English literature.

53. *School Radio Station.* Many schools have their school newspapers, operated as nearly as possible like regular commercial newspapers. We also have our school radio station, operated as nearly as possible like a regular commercial station. The station has its president, manager, program director, vice-president in charge of music, vice-president in charge of dramatic programs, *et al.*, newscasters, disk jockeys, announcers, engineers, and so on. Its vice-president in charge of advertising clears all the material on cafeteria menus, parties, various drives, and other events in which people of the school are trying to promote special interest. Our equipment is the school public-address system. Our program goes on twice weekly (at half past twelve, half an hour before the noon recess is over, on Wednesdays and Fridays) and runs for an hour each time.

Program responsibilities are divided among various groups. The dramatic group is responsible for a music and comedy program. Anybody in the school who thinks he is quite a wise guy or a gag man can have a spot on this program—at least once. We also use quizzes, short news periods, interviews, musical programs, in fact anything that the ingenuity of the staff can devise. We welcome suggestions from the listening audience. Some of the programs are put on before live audiences who supply the applause sound effects. This requires an assistant producer to signal for applause, sound effects, and so forth.

54. *Letter Writing.* At the beginning of twelfth-grade business English pupils are asked what kind of training they believe they need most for the work they plan to do. Many pupils, apparently for the first time, are made to see that "English" covers a great variety of activities and has many uses. To stimulate their interest in the writing of various kinds of business letters, pupils are first taught how to write inquiries. We send these to businessmen in the community and throughout the state asking for suggestions as to their own requirements with regard to the kinds of letters used in their offices. The replies are made the basis of further study in letter writing.

## Practice 7: PUPIL PARTICIPATION

*Using the Ideas, the Help, and the Responsibility of Pupils in Planning and Carrying Out the Work of Class, Club, and School*

*Use This Practice to . . .*

- c. Guide pupils in learning to think.
- d. Develop desirable character and personality in pupils.
- e. Develop good citizenship.

Who runs the school? The administration. But who is administration? Some may think that all the essence of administration is packaged in the person of the superintendent and that he passes little packets of it to each teacher who manages a class. Many schools are run as though this were true. Ultimate responsibility, of course, does fall upon the shoulders of the head of the school system; what happens in the school is the responsibility of the principal; what happens in each class is the responsibility of each teacher. Without question the professional staff get the blame or credit for what goes wrong or right. But staffs which manage schools and classes entirely on this premise throw away one of the most important tools of teaching.

*Pupil participation is a most effective teaching instrument.* We want pupils to learn to think for themselves. But thinking is an active thing—perhaps the most all-consuming act that any man can engage in. In thinking one (1) examines a problem, (2) suggests possible solutions, (3) tests his possible solutions in practice, (4) evaluates the results to see which of the possible solutions gets the best results. Thinking involves all these steps. Learning to think is learning to use these steps. If any-

where along the line the "omniscient" adult steps in with his superior wisdom the lesson is incomplete.

The same may be said about a citizenship lesson. Citizenship is an active thing. Words have a way of remaining just words. A citizenship lesson from a book is short-lived. Citizenship principles must be tested and practiced—and practiced over and over again. Character and personality too. Personality is the outward sign; character the inward condition. What we want pupils to become—inwardly and outwardly—we must give them practice in becoming.

*The essence of participation is having a package of authority that is yours to handle—and yours alone.* If you make a mistake it's yours to correct—or yours to live by. Mistakes are a part of learning. Pupils are going to make mistakes. The function of the teacher is to help in evaluating procedures and results, to guide in circumventing mistakes: but not to protect entirely from mistake, not to build a wall around reality. Many staffs would rather have a smooth-running school than anything else. Therefore they fear giving packages of authority to immature pupils, fear the mistakes that may follow—indeed will follow. They overprotect, just as many parents do. They tell pupils what to do. And pupils are robbed of a chance to learn by improving upon their own errors.

Those schools and teachers that have been most successful in using pupil participation as a teaching tool have delegated to pupils certain clearly defined responsibilities that remain the pupils' to manage, for better or for worse. They do not expect that the pupils will manage these responsibilities any better than the teachers can—although they *may* do so. Rather, they recognize the school as a training institution and are willing to give the pupils enough room in which to exercise.

*Pupil participation is democracy in action—at the learning level.* The essence of democracy is this: Place the exercise of authority as close as possible to those affected. Learners obviously cannot be expected to exercise all the decisions by which they are affected. It is well to realize that this is even true of the President of the United States, and of Congress, and of the courts. It is true of great corporations and labor unions and universities. We live in a world of checks and balances. But learners can exercise some of these decisions. And the proportion can be increased as they grow in maturity.

*Pupil participation makes for a better managed school.* Though for training purposes we delegate to pupils certain packets of authority,

commensurate with their ability to handle them, the by-products of the practice make for a better school.

The truth in this is the essence of democracy. It is usually true even in the narrow sense of immediate results achieved. No matter how brilliant or wise the professional staff, they do not have a corner on ideas. No one man and no one group can know everything, think of everything. Experience has shown that even young pupils can have ideas too—and good ones. Being closest of all to the outcome of school policy their suggestions on procedure are frequently the best of all. Furthermore, no policy can long operate successfully without the cooperation of those affected. The attitude of those affected—the pupils—the participants in policy formation and management, can go a long way toward ensuring smooth operation of the school and the classroom.

It may be added that effective participation is deeply satisfying and this satisfaction must be added to the fruits of the enterprise in judging its efficiency. It is well for youngsters to experience this satisfaction so that as adults they will not so easily give up their part in government to remote agencies, as we have tended to do in recent generations. We have tended to forget that the quality of government must be judged in part in terms of its "participation effects" on the governed.

#### SAMPLE PRACTICES

The sample practices are classified under the following headings.

1. All Age Groups
2. Elementary Grades
3. Middle Grades and Junior High School
4. Junior and Senior High School

#### ALL AGE GROUPS

1. *Checkup Committee.* One of our regular class committees is a Checkup Committee. Whenever the class goes to the library it is the duty of this committee to see that the library is left in good condition—the tables clear, the floors clean, no articles left behind. If anything is amiss after the class leaves the library, the fault lodges directly with the Checkup Committee, not with the class as a whole or with any individual. Simi-

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. A person learns only by his own activity. (See Reason 1, Practice 6.)

2. Participation enhances learning. Even so simple a form of participation as repeating in concert after the teacher has been found to enhance learning. Participation (doing it, taking part) is essential to any complex learning. Complete participation is important—from planning to checking the results. A person learns by his own mistakes only when he can see and feel the effects of his acts.

3. You can't train the mind like a muscle. If you want a certain result you have to drive directly for it. If you want pupils to learn to manage affairs, they cannot learn by precept, books, and talking. They can learn to manage affairs only by having some actual authority and responsibility.

4. Abundant realistic practice contributes to learning. (See Reason 2, Practice 6.)

5. The best way to learn a part in life is to play that part. (See Reason 1, Practice 5.)

### SOCIETY SAYS:

6. Keep your eye on the real and significant concerns of human living. Too often we dismiss pupil participation as taking too much time from the "real" job of school—the study of basic subject matter. Whatever we teach can have value only in terms of the concerns of living. The ability of our citizenry to manage the affairs of society is a primary concern.

7. We should teach people to do better those desirable things they are going to do anyway. People are going to administer the functions of democracy; either many or a few will do so, according to how well we teach them. Schools back down on a major responsibility when they do not do all that they can to teach pupils to manage the affairs of society better.

8. The school should make up for the work of those agencies of informal education which have deteriorated in modern society. The home, the farm, the small town with its close associations, were strong educational influences in other years. Growing boys and girls had duties and responsibilities that gradually matured with their own maturity. But our society is changing. What agency except the school can give to boys and girls today these responsibilities to grow on?

## SAMPLE PRACTICES (Continued)

larly this committee functions when the class eats together in the cafeteria, when it goes to the gymnasium, when it goes on the playground, and so on. Membership is rotated.

2. *Luncheon Club.* To make the noon period as pleasant and congenial as possible for high-school students who bring their lunches to school, the library, which is large and attractive, is turned over to these students as a meeting place for their Luncheon Club. Student officers, elected by the students themselves, supervise the program. They are responsible for the order and cleanliness of the room during the noon hour. A teacher is available in case of emergency, but unless she is called upon the boys and girls are left to conduct their own affairs. The gym, athletic equipment, and other school facilities are accessible after the lunch period. The plan is a considerable improvement over the former procedure of having a teacher supervise the students in a classroom during the lunch hour.

3. *Helping Each Other Make Up Absences.* In the season for colds and other diseases, helping absentee youngsters keep up with the work they have missed can be quite a problem. So we have worked out a plan by which the boys and girls have agreed to take this responsibility upon themselves. In the morning a member of the class volunteers to take the responsibility for an absentee. He gets and carries with him a folder for the necessary materials. He copies assignments and slips other material into the folder during the day. He assembles the necessary books and then sees that the folder and the books get to the home of the absentee when the latter is ready for work. If the absence is short the work is ready for him when he returns.

4. *Pupils Plan and Conduct Trip.* As an outgrowth of our study of the water and food cycles our eighth grade planned a trip to inspect our water-supply system. Pupils organized and managed all the details for the trip. They elected chairmen and committees on transportation, finance, and arrangements. The last group took care of preparations for our visit and arrangements with authorities on the spot.

5. *Courtesy Committee.* The Courtesy Committee functions each period throughout the day. Members on duty at any period are drawn from the study hall for that period. The committee is composed of boys and girls who are representative, yet are selected because of their gentility, natural attractiveness, and dependability. They greet strangers who come into the building and direct them to places where they want to go. They assist in seating visitors who attend school assemblies, escort visitors over interesting parts of the building and to classes where interesting activities are going on. In fact they perform many small but important duties. After the committee has been organized and a capable chairman selected, it needs almost no teacher supervision. The chairman makes the rounds daily during his period to check on those on duty for the period and carries a list of alternates. All complaints are registered with the chairman, who in turn reports to the faculty sponsor. Chairmanship of the Courtesy Committee makes a pupil an *ex officio* member of the student-teacher council. Thus all committee chairmen have direct contact with council representatives from all homerooms, furnishing a natural channel for clearing up many school problems.

6. *Welcoming Substitute Teachers.* We had an acute substitute-teacher problem in our school. Many of the classes realized that they could make life miserable for the substitute and they usually proceeded to do so. One of our classes got to discussing the problem one day. It was pointed out by some one that when a new pupil comes to our junior high school he is never permitted to find his way for himself the first day. We have some one assigned to look after him and act as host for his first few days of school, introducing him to other boys and girls and seeing that he gets to know his way around. Some one wondered why the pupils could not be as considerate of a substitute teacher. Consequently the group decided to organize a substitute-teacher welcoming committee. They elected a three-member committee for each day of the week. The committee for any given day was to speak for the class should any substitute teacher be necessary on that day. Members were to greet the substitute, offer her any help she might need, explain the work that was going on, and indicate to her what materials were being used. The group drew up a set of rules to which all subscribed regarding its own conduct in the presence of a substitute. A copy of this was made for posting and was signed by every member of the class. After they found that their plan worked very

satisfactorily for all concerned the members of the class went to other classrooms to explain how their plan worked, with the hope of encouraging other classes to do the same.

7. *Safety Committee.* Among the large number of responsibilities which we have allotted to student administration in our elementary school is the job of the Traffic Committee. In September each class selects two representatives. This committee has full control and responsibility for corridors, stairways, and playgrounds. But its job is not solely one of patrolling. It meets each week to discuss building conditions, playground problems, and to assign duties to the traffic squad members. The traffic squad is an organization consisting of one hundred and ten pupils divided into three platoons with three student chairmen. The chairmen are members of the Safety Committee. The three platoons of the traffic squad serve alternate weeks in maintaining good conduct in the building, on the playground, and in the enforcement of safety measures.

When a new plan of regulating corridor traffic does not work out as anticipated by the Safety Committee, the latter is quick to modify or discard it. The committee's planning and its carrying out of plans make an excellent opportunity for it to become familiar with the problems of handling people; members gain experience in solving real-life administrative problems and in thinking out solutions and testing their ideas.

#### ELEMENTARY GRADES

8. *Pupils' Bulletin.* A part of the bulletin board in my third-grade room is reserved so that the children may put on it whatever they please. I have nothing whatsoever to do with it. The bulletin is theirs for clippings, notices, pictures, anything they want to put on it. When a child has something to put on the board and there is no room available, he consults with some other child whose material has been on display for some time and asks whether he can remove the old display.

9. *Toy Sale.* Part of pupil participation is in exercising ingenuity in the raising of money. It is very well to assess fees or to provide for many pupil activities in the regular school budget. But there should also be a number of activities the support of which is solely by money raised by the pupils themselves. Money-raising projects are a part of life itself, and

I have found that such projects offer pupils as much of an opportunity to be creative as any other kind of planning. Our elementary-school student council, for example, thought up the idea of a toy sale. Council representatives canvassed all the rooms of the school making a plea for outgrown toys and books. Each classroom made a large contribution, and each had its own table in the gymnasium where its toys and books were sold. Classes set their own prices. Within an hour and a half the student council had enough money to carry out the enterprise it had in mind. Pupils went away delighted with toys and books that were new to them. So successful was the sale that it has now become a regular student council institution. This year the net proceeds were \$32.57.

Children delight in sharing something they have enjoyed. They also have become good judges of values through repeated toy sales. They have learned to save and take greater care of their toys at home so that they can contribute them to the student council toy sale when the event rolls around.

10. *Rules for Discussion.* Rather than give the pupils the rules for carrying out many of the activities connected with classwork, I prefer to have them sense the need for such rules and then draw up rules for themselves. For example we have a regular time for a discussion period in our sixth grade during which pupils who have previously volunteered present topics for discussion. The first discussion period usually does not go very well. The discussion leaders and the other pupils sense this. I usually arrange it so that time is available for us to discuss the problem. Eventually some one suggests that we need some rules or guiding principles of procedure for our next discussion period.

During a teacher-led discussion they suggest and incorporate into their list of rules such directions as: Choose interesting topics for discussion; keep to the topic; participate in the discussion by asking at least one question; and so on. These points may be modified at any time as we go along, but pupils take a more active responsibility in the discussion period after they have had a part in drawing up the rules to govern it.

11. *Interclass Entertainment.* In our seventh grade each homeroom takes turns entertaining the two other homeroom groups. Since this means a gathering of ninety children in one room careful planning is necessary in order to avoid confusion. The entertaining group learns the proper

way to write and issue invitations, to think first of the guests and plan for their pleasure, to greet guests, to introduce strangers properly, to take care of the equipment in the library where the party is held, to plan and put on a successful entertainment, to serve refreshments properly, to wait courteously until all guests are served, and to be gracious in manner.

The sixty or more guests learn how to answer invitations according to good social taste, to participate in the planned entertainment, to be gracious and kind to their hosts, to thank their hosts for a nice time.

12. *Self-evaluation in Citizenship.* My children participate in marking themselves in citizenship. Even though our report card (somewhat of the old-fashioned type) does not have a place for reporting on citizenship I have marked in a place on the conduct side of the card where citizenship is reported at each marking period. During each marking period we set aside two weeks in which we make the self-evaluation in citizenship. Each pupil marks himself each day on a chart posted on the bulletin board. Opposite his name is a square for each day. He colors the square blue for excellent, red for good, and yellow for fair. He leaves it uncolored for poor. The idea is to make as many blue boxes as possible on the chart. A blue line all the way across the chart indicates a "blue-ribbon" citizen. The children mark themselves on self-control, good work, golden deeds, etc. (various character traits expressed in terms they can readily understand). When a pupil has marked himself on the chart he may be challenged by some other pupil. A challenge means that the pupil must defend the marking he has given himself. Other pupils may be drawn into the discussion as to whether he was correct in giving himself such a high marking (or at times he may be too modest). In this way objectivity in the self-evaluation is encouraged. The results of these self-evaluations form the basis of my report-card mark on citizenship at the end of the report period.

13. *Sales Promotion.* The sixth grade was asked to take over the sale of savings stamps. They organized the project successfully by discussing and deciding upon such questions as: What kinds of stamps should we sell? How should the publicity be handled? How should we handle the actual sale of stamps? How can we avoid financial error? To how many jobs do we need to assign people? How should we choose the people for each job? How many people do we need in all? On the basis of this dis-

cussion a workable program was put into practice which they had organized entirely themselves.

14. *Guest Artist.* I make it a practice whenever I can to invite children who were formerly in my second grade to come in and help teach the present second grade certain skills for which the former children were noted. For example a fourth-grade boy who was especially good at modeling when he was in the second grade may come in and help some of the children with their modeling. This little practice accomplishes several things. First, the second-graders get good instruction from one who is close to their level. Second, the boy who was a good modeler is reminded of his skill, in case subsequent teachers have not given him an opportunity to continue practicing it. Third, experience in cooperation is valuable for children of different ages.

15. *Class Government.* Our class meets weekly as a citizenship club. Pupils do much of the planning of room- and school-operation. I have held steadfastly to the habit of staying in the background and saying nothing unless asked. Even then I prefer to pass the discussion and the decision back to the pupils—so much so that now I am seldom asked. I hold to this role even though I can foresee that the pupils' decision may be a mistaken one, for they are learning and can scarcely be expected to learn if they are constantly protected from mistakes.

Under their class officers they take up such matters as better arrangements to protect bicycles from being tampered with, rules for Halloween games, decorating the room with small plants, and so on. A long list of room duties has been compiled by this group (much longer than I would have compiled) with a new duty to take care of every management difficulty that may come up. These include answering the telephone, taking care of the boards, taking care of easels, dusting erasers, dusting the room, and caring for plants. At the end of each meeting of the citizenship club the list of these room duties is read by the secretary and volunteers solicited for each duty for the next week.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

16. *Student Activity Rating Card.* A committee of pupils was appointed to study the problem of improving the quality of work and quan-

ity of contributions which pupils make to the various clubs and other activities of which they are members. This student committee developed a student activity rating card for the purpose of evaluating the contributions of members of clubs. A rating committee in each club, working with the sponsor, evaluates the contribution of each member at each regular report period. A copy of the card is kept in the office for each pupil, and a committee of pupils does the recording. Any pupil may inspect his card at any time. A summary score taken from the card forms the basis of the pupil's report-card mark in the activity. This record has proved useful when the school is asked for recommendations.

17. *Raising Hands.* I like to develop in my pupils an easy facility for group discussion. But a pupil-motivated discussion is hard to get with pupils raising their hands to be recognized. This is one of the artificialities of the typical school situation that have no counterpart in life. In order to correct this and at the same time to maintain some sort of group discipline in discussion, I use the following method with all new classes:

During the first week I let the boys and girls use their hands to ask for recognition. Then after a particularly interesting discussion I ask them if they are satisfied with using their hands. Usually some one suggests that it might be possible for them to talk without using their hands. If the problem is raised that then more than one person would be talking at once, we finally agree that it might be possible for one to wait until another was finished. Pupils quickly catch on to the new technique, enjoy it, and appreciate it. After a bit no hands are raised, and very seldom does one pupil interrupt another who is talking. The children become more courteous to one another and learn to take turns in speaking.

18. *Gym Leaders.* To develop pupil initiative in the management and control of activities in the gymnasium I use a system of pupil leaders. First there are the general helpers. Different ones of these have charge of lights, equipment, keeping scores, assigning space to teams, etc. Second there are the gym captains and their assistants. These officers are chosen by the pupils. Their responsibilities are to check attendance, inspect for neatness, inspect equipment, organize teams for the day's activities, conduct teams during the playing of games.

All these leaders have learned to take their responsibilities well, for

the most part. Consequently activities at gym period move at a fast clip. My presence as the teacher is made the most of because such details as equipment-handling and taking attendance are taken care of by the helpers, and I am left free to do a job of teaching. The leaders (and these responsibilities are rotated among the pupils) gain much that is important from their responsibilities—initiative, self-reliance, self-control, self-esteem, and leadership training.

19. *Assembly Committee.* In our school the Assembly Committee consists of about thirty-five pupils. This committee is further subdivided into small committees of three or four pupils each. These small committees are each in charge of programs of a particular type: One committee is in charge of religious programs, another in charge of music programs, another occupational programs, and so on. The chairman of the large committee and the various chairmen of the small committees maintain a continuing survey to find out which programs are most acceptable to students, which type does the most good, which kind comes within the financial means of the school. Each small committee puts on two or more programs of its particular kind each year. As soon as one of its programs has been produced the committee begins work planning the next.

20. *Citizenship on School Busses.* The School Bus Committee is one of our school service organizations. Its chairman sits on the student council, and a member of the teaching staff is adviser. In early September this committee sponsors a general meeting of all pupils who ride busses. The purpose of the meeting is to point out to the bus pupils the functions of the committee and enlist their cooperation in making the bus service a safe and dependable one and their behavior on the busses in line with the school's good-citizenship objectives. The committee holds regular monthly meetings (and holds called meetings if necessary) to discuss problems in connection with bus travel.

A member of this committee regularly rides each bus and turns in a daily report to the teacher-adviser and committee chairman. The report is made on a mimeographed form that contains places for date, bus number, number of children on bus morning and afternoon, time of arrival, reasons for delays (if any), discipline report, and suggestions. Problems indicated on these daily reports are followed up through conferences involving pupil, teacher, principal, parent, or bus driver.

This practice furnishes excellent training for the members of the committee as evidenced by their better handling of problems as they become more experienced. A better attitude of pupils toward the bus service given them has also resulted, with elimination or easy settlement of minor problems like pushing, reserving seats, and bullying.

21. *Improving Morale.* Our student council often sits as a court to judge those students who are guilty of infraction of the rules established by the council. But they very seldom administer punishment in the fashion that is usual with courts of this sort. For example in our sixth grade there was a small group of boys who were often getting into difficulties. Their behavior was the subject of a frank discussion by the members of the student council. The council finally decided to try them out as committee leaders.

One was appointed head of the Safety Committee, with the right to choose his own committee members. Naturally he chose two of his "buddies" to assist him. This committee assisted the physical director with the spring bicycle tests. They made sample bicycle tags, chose the one of best design, and made enough to present to all who passed the tests. They organized an assembly program in which these tags were presented to the successful bicyclists and to which the police chief was invited to talk on bicycle safety.

Another such committee was the Sports Committee. This group attended every student council meeting, reported games to come, scores of past games, made "radio" announcements, and sent reports to local newspapers.

22. *Fostering Pupil Participation.* During the first month or so of school I ask each pupil to write me a letter giving ideas for improving our school and planning our work. I tell them that there are certain basic things we must study and do, but there is no reason why we can't adopt some of their ideas for other parts of our work. These letters are read to the group, discussed, and those proposals are selected that we feel should and can be carried out.

23. *Current-events Panel.* Once a week we have a current-events panel, consisting of four children of my seventh grade. These four, chosen a week in advance by election of the class, are responsible for planning

the current-events presentation for the day. The panel may use any method it wishes—talk, dramatization, question and answer, or a panel chairman asking questions of other experts on the panel; the only stipulation is that it be interesting. Though elected by the pupils, no panel member can succeed himself more often than once every seven weeks. This gives every pupil a chance to be a panel member.

24. *Qualifications for Candidates.* We hold a number of different kinds of elections in our seventh grade. The purpose of our elections is primarily to get pupils to judge candidates on the basis of their qualifications for office rather than on the basis of general popularity and personality. Candidates are elected for many different kinds of offices, but in each instance the qualifications for the office are thoroughly discussed and a class-developed list of qualifications for candidates written on the board. For example in our class government club there are four offices. For some time preceding election of these offices we discuss the qualifications one should have to fill each office successfully. The qualifications are left on the board. Pupils discuss them among themselves and discuss possible candidates. Then nominations are held. Candidates' names are written on the same board near the list of qualifications. Several days later the election is held.

#### JUNIOR AND SENIOR HIGH SCHOOL

25. *Student Speakers' Bureau.* We have organized a speakers' bureau made up of good student speakers. It is an honor to serve on this bureau. The members are on call at any time to present well-prepared and well-spoken talks to any organization in the community. The types of talk range from a general publicity presentation of what the school is doing in various respects to interesting talks in the fields of science, history, music, community lore, or any other topic studied in the school.

26. *Student Activity Rating Cards.* We have instituted a policy of keeping records of the ratings of students obtained in various extra-curricular activities. There are two important purposes of this program: first, to impress upon the student the value of fulfilling his responsibility as a member or officer of an organization; second, to enable us to include success in student activities as a part of the record for recommendation

to colleges and to employers. The recording of ratings is supervised by the secretary of the student organization with the assistance of several responsible pupils who are appointed to assist him in this work. Club members who are not officers are rated in each club or other activity by a special rating committee consisting of the vice-president of the club and two other members appointed by the president. Their ratings are subject to the approval of the president and of the club faculty sponsor. Officers of the club are rated by all the other officers. The work of members and that of officers are rated on different bases.

This plan was worked out by a student committee, which also devised the ratings and the system by which ratings are to be made. Ratings are S for superior, B for better than average, A for average, and P for poor. The rating system for all club members who are not officers allots 30 per cent for service to the club, 20 per cent for participation in meetings, 20 per cent for attendance at meetings, 15 per cent for spirit or interest, and 15 per cent for extra work and initiative. The rating system for officers allots 15 per cent for ability to organize, 15 per cent for results of efforts, 15 per cent for maturity in judgment and self-control, 15 per cent for manner of choosing and working with assistants, 10 per cent for time given to position, 10 per cent for dependability, 10 per cent for initiative, 5 per cent for spirit, and 5 per cent for conception of position. A student activity card with a place for listing all activities and ratings for each is a part of the permanent records.

27. *Improving the Lunchroom Program.* A project in improving conditions in our lunchroom was undertaken by a group of children in the health-improvement class. While discussing diet and luncheon choices the condition of lunchroom management was brought up. The children suggested that something might be done to improve the atmosphere of the place as well as to reduce waste. They accepted the teacher's proposal that they undertake the project.

They spent several lunch periods analysing the conditions. These were discussed in class meetings and a series of criteria were set up. They finally organized a program which involved seating children with others of their own grade at a designated table with a host or hostess from the health-improvement class. They agreed that the hosts and hostesses should encourage good table manners, friendly conversation, and eating a little bit of everything—even if the eater didn't like it.

The program was introduced at an assembly in which the class explained their purposes and described the means which they suggested to improve the lunchroom situation. Later on they put on plays, songs, and finally a party to promote the new lunchroom setup.

The results were also noticeable at home. "I tried those same ways at home with my little sister and now she's eating better, too," said one.

28. *Lunchroom Committee.* We have examined the workings of almost every phase of our junior high school with an eye to developing opportunities for student administration. Our Lunchroom Committee is one such development. It is made up of pupils from all three grades who volunteer their contribution toward our program of student administration. The committee's primary function is to supervise the lunchroom according to the standards of citizenship set up by our student body. There are a student chairman and several student monitors. The chairman is responsible directly to the student council. He locates, assigns, schedules, and supervises the student monitors. His work puts him in contact with various homeroom organizations and teachers, with the administration of the school, and with the faculty supervisor of the lunchroom.

The student monitors are responsible for maintaining order, reserving tables and controlling lighting and ventilation. Other members of the committee are cashiers, counter helpers, and bus boys and bus girls. (For this work the students receive remuneration. The jobs are rotated.)

Pupils who serve on the Cafeteria Committee realize the importance of their office. The responsibility placed upon them helps to develop such qualities as sincerity, dependability, and reliability. They realize the necessity of being resolute in their decisions and above all of being fair umpires in disputes in order to command the respect of their schoolmates. One guiding principle, kept before them by signs and other means, is this: "If each pupil in our school were to act as I do, what kind of place would this be?"

29. *Book Reviews by and for Children.* Our Library Club conceived the idea of publishing a regular bulletin for all the pupils in our school. The interior is mimeographed, while the cover is printed with a catchy illustration and title done by woodblock printing. The bulletin also has unusual dimensions to make it distinctive—the size of regular mimeo-

graphed paper folded lengthwise. Members of the club make up the reviewing staff. Each member writes a review of the best book he has read since the last publication, trying to make other pupils feel the thrill in it that he had felt. Eight or ten top-notch items are reviewed in each issue—both fiction and nonfiction. Also, books of topical interest are mentioned, such as items in the library from which current motion pictures have been taken.

30. *Club General Manager.* To give all pupils a chance to be chairman of our club meetings, yet be assured of having the work well done, we have a general manager whose duties are to keep track of each project being worked on by a committee and to assist the chairmen of the committees in whatever way may be needed. This general manager was selected after the club had participated in several projects and this pupil had proved to be a good chairman and an excellent leader. Now he seldom actually chairs meetings of the club or of its committees but assists other pupils who act in this capacity.

31. *Band Self-government.* Our band classes are organized with a high degree of self-government. Officers are elected each year. These officers compose an executive council. All routine duties, such as taking the roll, keeping the physical equipment of the room in order, taking care of the band library, and caring for uniforms and instruments, are handled by these elected officers. Band policy concerning general conduct, playing for out-of-school engagements, penalties for breach of rules, and so on, is determined by the whole group. The executive committee acts as a court to try students guilty of breaking these rules of conduct. The maximum penalty—after repetitions of offenses—can be exclusion from the band.

32. *Student Research Committee.* Our student council has a group of research advisers who are not members of the council. This group, the Student Research Committee, carries on a continuing investigation of the work of the student council and its effect upon improving conditions in the school.

The committee meets once each week. Its problems are assigned to it by the executive committee of the student council, by the superintendent of schools, by the high-school principal, or by members of the school

faculty. But all assignments are first approved by the executive committee of the student council before they are tendered to the Research Committee.

This committee investigates the literature bearing upon student councils and student cooperation, writes to other schools asking for information on the handling of their pupil-participation problems, conducts questionnaire surveys and interviews of both faculty and student body. Usually a semester, sometimes a whole year, is spent collecting data bearing upon a problem, discussing and interpreting the data in its weekly meetings, and preparing its report. When a study has been completed, the Student Research Committee reports to the executive council and later to the whole student council, to superintendent, principal, or before a faculty meeting. Generally their report contains recommendations for changes and improvements in the organization or workings of the student council and, sometimes, of the school itself. Suggestions pertaining to the council are acted upon by that body; suggestions involving school changes are acted upon by the administration and faculty.

33. *Emergency-room Committee.* A committee of high-school girls assumes full responsibility for the Emergency Room, which is our infirmary room, equipped with bed, medicines, chairs for visitors, etc. They come to the room every morning at a stated time and see that the room and equipment are in proper order; they make the beds and replenish supplies.

34. *Safety Committee.* The Safety Committee, composed of high-school juniors and seniors, meets once a week. They investigate school and community safety problems and discuss them at these meetings, drawing up suggestions for presentation to the school administration. Safety campaigns and programs are launched through this committee. The committee has representation on the Town Safety Council. Their representative sits in with those of community organizations—industrial groups, civic organizations, etc.—in planning safety programs for the town.

35. *Buildings for Commencement.* This year the entire senior class is engaged in preparing a different kind of commencement. It is going to feature in its commencement exercises a presentation on an ideal school building for our town. A complete file of materials on school buildings

has been prepared and is being used by the members of the class. They are obtaining much information about desirable facilities and are reaching decisions about how these facilities should be applied to their own town. In addition they are devising interesting plans for presenting the material to the audience—through pictures flashed on a screen, movies, speaking through the public-address system, dramatizations, and other devices. This project is especially timely in view of the fact that a building campaign is only a short time away in our community and this program may well be the first step in the campaign.

36. *Exchange Students.* An idea was born when several students from foreign countries visited the United States recently. "Why not an exchange with students in the United States?" suggested one of our high-school seniors. The idea was presented to the student council and they immediately went to work on it. A student committee was formed consisting of representatives from all the high-school grades. Their proposal is to send one boy and one girl from each grade to spend ten days in a school in some part of the United States that is considerably different from our own. The students will be housed with the parents of children participating in the exchange. Those to make the trip will be chosen from among those indicating a wish to go by vote of the student body and by ratings given each student by the faculty. The ratings will be based upon ability to bring back most and benefit most from the trip.

The committee has laid out these purposes: to broaden the students' outlook on life, knowledge of people, attitudes and habits of thinking, to enlighten the students in patterns of home and school life in localities different from their own; to provide an opportunity for visiting places of interest in another part of the country.

Information to be gathered has also been planned by the committee. Seniors will study the other school's preparation of its students for college, provisions for those who do not go to college, school spirit, and will observe the problems of being away from home. Juniors will find out about student-government organization in the other school. Sophomores will study the pupil-activities program and freshmen will find out about the method of selecting courses of study and the orientation program of the other school.

Various local clubs and civic groups have become interested in helping to finance this course in human relations, and Air Age Education Re-

search is assisting us in locating another school which would be interested in cooperating with us.

87. *Pupil Planning.* At the beginning of the school year my high-school social-studies students collaborate in a study of problems which need solution and on the basis of their study lay out the program which we will take up in class for the rest of the year. The process of planning usually occupies from two to four weeks. At the beginning I hold discussion meetings with a few members of the class at a time. I find that with six or eight students gathered around a table, discussion is much more lively and each student's ideas are much more likely to come to the fore. These meetings are scheduled at odd times, sometimes during class periods, but never in the room where the rest of the class is engaged in some other activity—study, viewing a picture, or meeting with some other class. Some of the meetings are held before school, some after school, some during study-hall periods. After my first meeting with a group the group organizes and continues its discussion without me. Its principal purpose is to identify problems for study.

Pupils interview adults, seek out problems in their personal lives, see films depicting aspects of modern life which contain problems for study, review magazines and books for pertinent problems. From all this activity hundreds of problems are identified and listed. During the identification of problems they keep these questions uppermost in mind: "What is the problem most clearly stated?" "Does the problem need solving now?"

After the list is completed several class periods are devoted to considering which problems, of all those identified, the students would get most benefit from studying. Criteria for selection are gradually worked out during these discussions. As problems are selected students particularly interested in any one volunteer to undertake the study. In this manner committees are organized. Following this preliminary planning stage the class embarks upon the study of a number of problems at once. Some of the problems on our large list are marked for immediate study; others are marked for deferment until the first ones have been studied. The make-up of the committees thus varies throughout the year as problems are exhausted and new ones begun.

Each committee organizes, chooses a chairman, and proceeds with preliminary discussion. During early stages of discussion in connection with a problem undertaken, the problem is defined, areas of it are delin-

ited, methods of investigation are blocked out, materials are scouted and secured, and individual research assignments are made.

38. *Superintendent-pupil Relations.* Each month representatives from all the student councils of the high schools in our city meet with the superintendent to talk over problems of the schools. The students may present problems or they may discuss problems upon which the superintendent wishes the advice or aid of the students. Many good ideas are suggested by the students which the superintendent may put into practice at once. Other ideas may be discussed over several meetings, but two kinds of things occur when suggestions are not immediately feasible: (a) the superintendent gives good reasons which must necessarily make sense; (b) the group together works on the suggestion—pupils and superintendent together—until it is feasible.

39. *Activities Budget.* The executive committee of the student body has the sole responsibility of preparing the budget for the various student-sponsored activities about the high school. The committee meets in the spring to prepare the budget for the following year's activities. The executive group sponsoring each activity makes a formal request for funds. Careful income estimates are made, based on past experience. The committee then prepares a budget in which estimated income and allocations to the various activities must balance.

But after the budget is prepared by the committee it must be voted upon and passed by a majority of the homerooms in the high school. Members of the committee make short talks explaining the budget during the week before the balloting takes place. The students handle the balloting entirely by themselves. If the budget does not receive a favorable vote from a majority of the homerooms, members of the committee must meet again with these homerooms to find out what their objections were. They then must revise the budget and present it again for balloting.

The students gain some insight into the matter of fiscal responsibility, into planning for the financing of a governmental activity, and learn some of the techniques of democratic group action.



## Practice 8: ACTIVE INVESTIGATION

*Teaching by Active Investigation in Which Pupils Secure Directly the Evidence with Which to Draw Conclusions*

*Use This Practice to . . .*

- a. Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- c. Guide pupils in learning to think.
- f. Develop attitudes and habits of good health and safety.

UNTIL fairly recently most of what has been taught in schools has been pre-digested for the pupils. The outstanding example of predigestion is the textbook, especially teaching by means of *one* textbook. It hardly seems reasonable that all that needs to be known about a subject could be packed between the covers of a single book. The handful of subjects taught from a handful of books that have until recently characterized the typical school have oversimplified the world's vast knowledge, have largely sterilized thought. Studying a subject from a single book is a narrow road to learning; it is also a dangerous road. Not only are the facts oversimplified, they are but one man's view of the facts. And so we find in a presumably well-educated population many common fallacies about history, science, the Indians, art, music, health, our European backgrounds, other races, and many other subjects. All are the results, largely, of one-text teaching.

*Active Investigation as a teaching tool stresses the use of many different sources of information.* If we study a subject we have many different books on the subject. And since books have a way of getting

quickly out of date in these times we use many periodical and pamphlet references. We learn that a true fact is a very difficult thing to find. We learn to contrast opposing arrays of evidence and steer gingerly between them to a tentative conclusion. We work with an open mind. There is probably no technique that is more needed today.

*But especially, Active Investigation is a way of letting pupils get the facts directly from the source.* Pupils must learn to think with real evidence, not with verbalisms. They must learn how to get original evidence, not take somebody's word for what the facts are. They must learn to do this, that is, if we are to teach them to think. They must learn to deal actively with the specific apparatus, equipment, tools, and procedures which pertain to the various fields they study. If we want them to learn certain scientific principles they must see these principles in operation. If we want them to learn the facts about society their search for evidence in the social studies must be as concrete as their observation of scientific principles in the science laboratory. If we want them to comprehend mathematics we must stop making them memorize somebody else's chain of thought; we must put them to estimating, investigating, experimenting with mathematical concepts. We must follow Agassiz: We must go directly to nature instead of to books—wherever we can.

#### SAMPLE PRACTICES

The sample practices for this section are classified under the following headings:

1. Lower Grades
2. Lower and Middle Grades
3. Lower and Middle Grades and Junior High School
4. Middle Grades and Junior High School
5. Middle Grades and Junior and Senior High School
6. Junior and Senior High School

#### LOWER GRADES

1. *Electric Circuit.* An interesting piece of equipment for my second-graders is a large board which I have had equipped with a buzzer and a small light. Unconnected wires extend from both buzzer and light. I give this and a dry cell to a child or perhaps two or three children and let

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. A person learns only by his own activity. The most active approach to a subject is the firsthand securing of evidence. The most passive approach is accepting the evidence that others present. If we want pupils to master a field it is imperative that we give them opportunities to collect and organize evidence that to them is original.

2. Firsthand experience makes for lasting and more complete learning. Did you see it? Were you there? Did you take part? We want to know these things before admitting that a person is an expert. Why? Because we know the difference between reading and hearing about it secondhand and the kind of knowledge and insight that come only from firsthand active investigation.

3. A person learns most quickly and lastingly what has meaning for him. When you secure and compile the facts yourself and arrange them in a pattern, they take on meanings that they do not have when somebody else does the job for you.

### SOCIETY SAYS:

4. Free access to the facts and free discussion are basic to democratic society. Since in a democracy every individual is free to decide what he thinks democracy owes to itself the duty of teaching its citizens how to get facts and how to interpret them. This means that pupils must learn to think with real evidence, not with verbalism.

5. Make what you teach useful and teach it so that it will be usable. Neither outdated books nor secondhand sources of information can provide the most useful data for learning to solve the problems of the modern world.

## SAMPLE PRACTICES (Continued)

them play with it. I tell them they can make the buzzer buzz and the light light if they make the right connections. Connecting the wires in one way will make only the buzzer buzz or the light light; connecting them in another way will activate both buzzer and light together. Whenever a pupil or group has been successful I ask them to explain to me how they did it, and then we talk about the principles involved. If it appears that they hit upon the right connections by trial and error I give the equipment to them again at some later time.

2. *Snow Demonstration.* To prove to my first-grade children that snow should not be eaten we fill a clean white vessel with snow and place the vessel where the snow will melt. When they see the dirt in the water the children are convinced that they should not eat snow.

3. *Clean Hands Experiment.* In connection with our third-grade study of health habits (which included washing of hands during the day and before eating) I decided upon a little experiment which would show the children how much dirt can be conveyed to the mouth by the hands. I brought eight pairs of thin white cotton gloves to class. They were left on display for a day. Then we elected six children who were to wear the gloves for a demonstration next day. Six pairs were worn while two clean pairs were left on display for comparison. At the end of the day the children wearing the gloves stood before their classmates and showed how dirty the gloves had become in one day, comparing the dirty gloves with the two which had not been worn. The comparison was striking. The grimy gloves and the white ones were then passed among the class for careful scrutiny while we discussed the implications.

4. *Thermometer Readings.* My second-graders became interested in how cold it was and what temperature readings in degrees meant. I secured a thermometer and hung it outside the window. Then we made a large thermometer on wrapping paper showing numbered degrees, with the words "freezing," "summer heat," etc. Beside this was a smaller chart for each day of the week. Each morning at nine o'clock the children take a reading of the thermometer outside, discuss the reading on the large chart, and enter the reading on the small chart for the particular

day. We take time every month or so to compare readings for the past several weeks, noting the ups and downs of temperature. This little practice does several things: It relates the experience of temperature to thermometer readings; it provides an elementary approach to measurement; it develops insight into figures.

5. *Height Measurements.* My second-graders have a chart marked off in inches. On this chart is a column for each child. Every month the children measure each other's height in inches. The results are shaded off in the chart each month, so that each month's growth stands out clearly. We discuss not only differences in height but differences in rate of growth. This practice furnishes elementary experience with measurement and with numbers and develops some insight into differences in the speed with which different individuals grow. The practice is self-motivating, since the youngsters are always anxious to measure themselves.

6. *Bird Study.* In connection with our study of birds my third grade decided to do a field study of birds that nest in our neighborhood. From March through June the class made a regular field trip once a week after school, and in addition individuals in the class made observations of their own from time to time. A chart was made and records kept of our observations, noting species of bird, frequency of observation of birds of the same species, location where bird was observed, and date. We wrote a report of our work and circulated it for others to read.

7. *First-grade Science.* I have approached science in the first grade largely through an attempt to cultivate the children's powers of observation. One who is alert can easily note the gradual changes which are occurring in the world about him—colors in trees and flowers, seeds and berries.

Each month of the year has its own characteristics in nature. By observation a child can become conscious of how animals and plants adapt their lives to seasonal changes. At the same time he learns to do certain things to make growing easier for living things, and in doing so he enriches his own living. In January, for example, members of the class noted the following: Snow covers everything, ice is thick, windows are covered with frost, days are short, birds hop around looking hard for food and seem tamer when we throw food out for them.

These observations and many more were made by the children and brought up in our discussion. We had stories on other January events which we were not in a position to observe—that some animals hibernate in the winter, that some birds migrate, that seeds sleep in the ground until spring, and so on.

We kept a record of all our observations on our newsprint easel for each of the months. It was a source of great interest in May to post all of our observations, month by month, on the bulletin board and, in retrospect, to review the year in terms of our own observations to see that, indeed, a number of very marvelous changes had occurred under our very eyes.

#### LOWER AND MIDDLE GRADES

8. *Science Corner.* Anyone who has worked with children in the field of science knows that certain materials must be accessible for children to use if they are to understand science. These materials are, however, often cumbersome and unsightly. There has to be some place to keep them. We have found it advantageous to set up a science table in the room. This table is large, steady, and covered with linoleum so that it may be used while doing experimental work. A stack of newspapers is available for further covering as necessary.

Various things are on the table at different times of the year, depending upon what we are studying. At one time the table may contain bell wire, electric push buttons, insulating tape, and batteries. At another time collections of earth, soil, rocks, and bottles of crude oil may be found there. At still other times the table contains a collection of ants, various types of spiders, egg cases of the praying mantis, and various types of cocoon. A microscope and a large reading glass are nearby to aid in observation. The table stands near our science closet. Things may be moved from closet to table or back again as needed.

Our room-library on science is assembled on shelves next to the experimental table. When research is required materials are on hand without too much looking. This is a real help to the young scientist; he is able to consult an authority while his interest in a subject is high and the subject lies before him.

We have found this setup a most valuable way to stimulate individual interest in science. Children are encouraged to become increasingly aware of the problems to be solved, to consider the problem in the light of other

problems already solved, to observe, to experiment, and to consult in order to get the facts and classify them.

9. *Simple Physics in Simple Objects.* During a study of sound the children made a telephone from tin cans and a string. They learned that vibrations are carried along solids better than through the air. Musical instruments, both wind and string, were brought in to demonstrate the changing of pitches, tones, and loudness. The school piano served as another object for observation.

10. *Movable Growing Table.* It is frequently difficult to grow things in connection with units on plants, or for experimentation in elementary science studies for two reasons: Where in the classroom can you grow anything except in pots on the window sills or in other out-of-the-way places? How can we grow things when the main growing season is in the summer when school is not in session?

We solved this problem by making a simple growing table for our room. We made the bottom of boards and then nailed six-inch strips around the sides to hold in the soil. We made movable strips which could be used to divide the growing area into different parts if we wished to experiment with different kinds of soils. Legs of two-by-two material were bolted at the corners. We mounted the whole on casters so that it could be moved readily. We can thus get it out of the way when we want to rearrange the space in our classroom for any other purpose; we can also move the table so that it gets the most sunlight at any time—thus overcoming one of the major difficulties of growing plants indoors.

Sometimes we put up trellises for plants that need them by tacking strips to the sides or ends and running longer strips between them.

11. *Bird-food Tree.* My primary-school children salvaged a Christmas tree and turned it into a "bird-food tree." They set the tree on the school lawn and proceeded to use it to make the birds feel at home. They brought suet, bread, crackers, raisins, and flower seeds. The raisins, seeds, and cracker crumbs were placed in paper cups tied to the branches.

The tree has proved to be a source of firsthand information. The children have discovered for themselves that all birds do not eat the same food. If a child brings something which is hardly suitable for bird food, we tie it on the tree anyway, and he learns what birds will eat and what

they will not eat. The children have observed a number of different kinds of birds that stay with us all winter. Also they have discovered that different birds leave different footprints, as evidenced by the tracks in the snow around the tree.

The tree was a great source of interest in our classwork. We wrote experience stories about it, and we drew many scenes illustrating it.

#### LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

12. *School Glen.* Near our school and actually a part of the school grounds is a wooded glen, with paths, a brook, and many different kinds of plants growing in a natural state. The boys of the shop have constructed a picnic table with benches, and the whole school raised money for the construction of an outdoor fireplace. Many of the classes use this glen for nature walks to learn about trees, leaves, wild flowers, and the habits of birds. Collections of seeds, flowers, or leaves are brought back to the classroom for further study. Plant terrariums are made from the plant life found there. There are many picnics held there. The Community Garden Club furnishes birdseed and the children see that the birds are fed throughout the winter. The Garden Club also uses the glen and cooperates in its upkeep. Members of the Garden Club come to the school to take the children on some of their nature walks and talk on various topics pertaining to nature study.

13. *Animals in the Science Room.* The science room of our elementary school contains its quota of animals. Committees of children take the full responsibility of caring for them, cleaning their cages, ordering their food, and feeding them. Any class is free to take an animal from the science room to the classroom as a pet or for observation. Pupils are taught the proper care and handling of these animals. Generally we have doves, rabbits, guinea pigs, fish, and snakes. We have also incubated young chicks and kept them in the room. A hive of bees lives in the room in a glass hive where their activities can be watched by the children. The bees enter and exit through an opening in the window.

14. *Local Terrain.* On the side of the town in which our school is located there are high hills, one overlooking the north-central, the other the south-central part of town. These hills are situated within easy walk-

ing distance of our school. In our second-grade social studies we use these features of the local terrain as a nice approach to becoming acquainted with our town. On a pleasant afternoon in early fall we sit on a high hill, munch an apple, and locate first the tall buildings, such as churches, the court house, and hotels. Then we find our school building, some of the main streets, stores, and our homes. From the other hill we locate more of the industries, as it overlooks the dairy, ice-cream plant, brickyards, factories, office buildings, and the railroad yards.

15. *Tadpoles in the Classroom.* My sixth grade was studying the life cycle of different insects and other animals. One of the boys who was interested in fishing brought some frog eggs. We placed them in an aquarium and watched them develop. We saw them hatch to tadpole stage; we watched the development of front and hind legs; we saw the tail disappear; and finally there was the small adult frog. Through this concrete example the children were better able to understand just what is meant by the words "life cycle" and to understand more fully what insects and other creatures go through in their life cycles.

16. *Mensuration.* In order to give children abundant firsthand experience with many of the quantities used in arithmetic, I ask them to bring to class as many different kinds of measuring devices as they can get. The response is usually overwhelming—there are quart and gallon cans, measuring cups, yardsticks and foot rules, surveyor's chains, tape measures, handscales, and many others. We then undertake a session of measuring. The children count pints of water in quart and gallon. They measure the dimensions of the room with foot rule and yardstick. They count the number of times the second hand jumps on the clock each minute. They study calendars to see that all weeks have seven days, but months vary in weeks and days.

This procedure takes some time, but I find it well spent, for the children have a much clearer conception of arithmetic exercises involving inches, feet, yards, quarts, gallons, etc.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

17. *Music Correlation.* I correlate music with my sixth-grade social studies work. Many times references are made in history texts about the

life and culture of the times—especially regarding music. But unless the pupils have an opportunity to hear the music, firsthand, the references must mean very little to them. Therefore my music correlations with history are a form of active investigation in which children experience firsthand some aspects of the life of other times which they are studying. While we were studying early man we listened to recordings of primitive music and rhythms. While studying Greece we studied examples of Grecian modes as employed in modern compositions (such as Pierne's "Entrance of the Little Fauns") and we also picked out the pentatonic scale on the piano and gave the children an opportunity to make up little pieces on this five-tone scale. During our unit on the Middle Ages we used the Gregorian chant, troubador songs, crusaders' hymn (both singing them ourselves and listening to recordings). We also sang "America" in imitation of early attempts at part singing, singing the song at intervals of a fifth apart. While studying England we sang English madrigals, listened to recordings of the Morris dance and maypole dance. In our study of China we listened to recordings of music played on native Chinese instruments and sang Chinese folk songs.

18. *Paint and Square Feet.* The interior of our school is going to be painted this summer. Our seventh-grade arithmetic class heard about this and proposed that it calculate how much paint would be needed and its cost. Pupils talked to the painter and from him found out how many square feet of surface a gallon of paint would cover. Then they talked to the paint-supplier and secured the price of paint per gallon. They set to work measuring the dimensions of rooms and corridors. They divided into groups, each group having responsibility for a section of the building. Each room and corridor was measured twice, each time by a different group. If their measurements did not agree closely enough, a third group took a measurement. There were a number of instances where there were variations in measurements. This gave me an opportunity to explain that even the most accurate measurement possible—in any field—is only an approximation because of errors of measurement and human errors. We prepared a chart of results and posted it in our classroom. The chart contained a place for every part of the interior of the building. As the measurements were made and verified they were entered in our chart. Then we totaled the result: From the total number of square feet of space which we found in the building—walls and ceilings—we calcu-

lated the number of gallons of paint that would be required and the total cost of the paint. We made a memorandum and submitted it to the office. Next fall we will receive a memorandum from the office indicating exactly how much paint was used and how much it cost. From this we will calculate the extent of our total error, if any.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

19. *Math Uses.* In order that pupils may realize that mathematics has an important place in everyday life, I have each of my classes search for evidence of mathematics at work. I usually do this early in the school year as an orientation to the mathematics work of the year. They look for newspaper and magazine clippings—pictures showing mathematics at work in business, factories, on engineering projects; articles discussing mathematical processes at work in the government, in offices, in research. They bring in pictures showing mathematical tools—compass, slide rule, triangle, protractor, micrometer, graphs. Most of the searching is done as homework. The pictures are brought to class, where each student presents his finds. They are discussed and the best ones mounted in a bulletin-board display which is changed frequently. Often a picture illustrates a principle which we shall later study. These I keep until the proper time.

20. *Firsthand Data for Graphs.* In teaching graphs I have pupils compile their own statistics for use in graph-making. A questionnaire is prepared and submitted to the members of the class, who answer it and hand it in unsigned. Questions such as the following may be used: "What does your father do?" "How many children are there in your family?" "Do you live in a house or an apartment?" "Do you own your own home?" "Do you have a car? Radio? Central heating?" Etc. When compiling this information pupils may class their fathers as professional men, merchants, domestics, industrial workers, etc. These data are then used to prepare graphs: percentage of professional workers represented in class, percentage owning radios, cars, etc. Comparisons can be made with national, state, and county statistics found in school libraries.

Old copies of the *World Almanac* may be used for gathering data which may be used for graph-making. Much data in connection with school business and activities may also be used: the cost of fuel and electricity per

month; cafeteria sales; cost of milk and ice cream; circulation of books from the school library; expenditures for books—school library and community library.

21. *Math Experiments.* If mathematics is taught as a series of exercises pupils will generally work these exercises in a mechanical fashion without using the judgment that will on occasion show them that errors have been made. Mathematical judgment, as well as facility in handling mathematical skills, needs to be developed. The practice of having pupils estimate answers is of course one example of attempts to develop judgment. Another one I tried in geometry in connection with the Pythagorean theorem—at best a pretty difficult subject to master unless you know its meaning. I asked students to work a great number of problems involving right-angled triangles, plotting them on squared paper and carefully measuring the sides. The data for each problem were recorded: length of short side, length of long side, length of hypotenuse. The hypotenuse (after a large number of these measurements) was observed always to be shorter than the sum of the two smaller sides, but always longer than the longer side. The pupils began to draw their own conclusions about the length of the hypotenuse in relation to the length of the other two sides. As one pupil observed: "Our experimenting put a ceiling on the length of the hypotenuse and ruled out impossible answers." Following this experimenting pupils applied their knowledge of square root and showed that the formula could be used to solve their problems and that the formula method was a little more accurate and more reliable. Finally we turned to the Pythagorean theorem itself, and the pupils had sufficient insight into the problem to know what they were doing and were sufficiently motivated to push through the steps of the theorem with energy.

22. *Film Critics.* Our Film Critics' Club gives movie-going an intellectual value, making the movie habit something more than just a way to kill time. Helpful materials are very plentiful—discussion guides, advance notes from the Association of Motion Picture Producers and Distributors of America, and numerous bulletins. With the aid of such materials, young movie-goers learn to recognize and evaluate the many techniques and problems met in production. Discussion meetings, collection of scrap-

book and file materials, preview trips to see new films, these are some of the activities of the Film Critics' Club.

#### JUNIOR AND SENIOR HIGH SCHOOL

23. *Barometer Study.* It is possible to carry an aneroid barometer to the boiler room, take the reading, then carry it to the roof and read it. From such readings the distance from the basement to the roof of the building may be calculated. Students wishing to observe the effects of acceleration may take a bathroom scale on the elevator and note the results of starting, stopping, and traveling at a uniform rate.

24. *Evenings with a Telescope.* I found my eighth-graders tremendously interested in spending their evenings using a telescope as a supplement to our regular classwork when we studied our unit on astronomy and the solar system. These evening sessions gave us much to talk about in our class discussions, and we were able to draw conclusions regarding astronomy with much greater assurance than would have been the case had we devoted our studies solely to the textbook. Our school happens to own a telescope, but small mounted ones can be borrowed in many communities. I scheduled a week when I could devote several consecutive evenings—also a week when the moon was in first quarter. Such a project is best in the winter when the sky is dark in early evening.

I selected five or six boys and gave them a lesson after school in transporting, assembling, and focusing the telescope. I had them come early, bring flashlights, and set up the instrument early enough so that they would have plenty of time to look before the rest of the group arrived. As the rest arrived I had them look through the telescope under low power and then again later under one or perhaps two higher powers. Parents often came too. Only one celestial object was observed on an evening.

Similarly, after our study of constellations, I arranged several evenings with star maps for any students who were interested in identifying the constellations we learned in class. Individuals could come for ten or fifteen minutes at any time during the session.

25. *Cooperative Research.* Sometimes I give my students in science laboratory a problem which is too big to be solved by the experiments of

just one student. The first time I use this method I discuss the inductive approach in science, conveying the general idea that it is not safe to generalize from just a few cases. We make a list of all the materials that are available for use in the attempted solution of our problem. We divide the job among individuals or groups of pupils, and then each tries different materials and methods and reports to the class on the outcome of his phase of the experiment. The data of all pupils are tabulated and the class works together in making any generalizations that the data seem to justify. Toward the conclusion of our discussions I make the point that most of the big problems in science are being attacked by the cooperative research of many workers. The cooperative approach makes for better class spirit than a strictly competitive one.

26. *Young Experimenters.* A great deal of the work of my junior-high-school class in general science is organized around the problems of students. Every afternoon students may be found in the laboratory trying out some idea. They are given a fairly free hand; they have only to tell me what they are going to do so that I may make sure nothing dangerous is tried. I believe that pupils need to try many experiments for their own satisfaction—experiments that to me or to some one with a knowledge of the field of science would seem obvious. Students bring their findings to the class, where they are examined by the usually critical eyes of other students.

27. *Making a Surveyor's Transit.* During our study of elementary trigonometry in junior-high-school general mathematics we made a working model of a surveyor's transit. We took an ordinary carpenter's level and rigged sights on it. Then in the classroom we tested our sights for accuracy by sighting various objects and measuring their distance from the floor and comparing this distance with that of the level from the floor. Then we attached circles (both vertical and horizontal) which had been carefully calibrated by degrees. We mounted the whole on a tripod and attached a plumb bob to the crotch of the tripod so that we could locate the exact position of the transit when we started to use it. During all of these steps we held frequent discussions as to why we were doing these things, relating the application to various principles in geometry and trigonometry. Both before and after our construction of the transit we examined a real one owned by a surveyor in the community. When our

working model was completed we divided the class into committees. Each committee then took a number of measurements: the height of the flagpole; the area of a vacant lot across the street; the distance between two trees. Each committee brought in its results and they were placed side by side on the board. A discussion of these results made it possible to point out errors in measurements, mean values, deviations, maximum and probable errors—all of which could be directly demonstrated from the evidence the pupils themselves had secured.

28. *Know-your-community Club.* We organized this club to help our high-school students become better acquainted with their local government and local services. We presented the idea in the annual fall bulletin advertising our club offerings. We stated that the club should not number more than twenty-five and that the first twenty-five who applied would be accepted and the membership frozen at that point. After our organization we discussed our general outline of activities. They were to consist of three parts: visits to various local-government and local-service agencies during the good weather in the fall; discussion of our observations and evaluation of the agencies during the inclement weather of the winter; a period of revisiting and reevaluation in the spring. We picked the agencies we wished to visit and selected club members who were to be responsible for making arrangements with officials in charge. The club period and lunch period which followed immediately were both used for our trips—giving us about an hour and a half for each visit. We took our lunch with us and usually ate it in a park on our way or on our return to school. We visited the telephone company, the town and village offices, police department, a bank, a laundry, the sewage-disposal plant, the post office, the shipyards, the newspaper plant and offices, the office and construction activities of a real estate development, the fire department, and certain marked graves of historical importance.

Following our visiting period we discussed each visit during the inclement winter months. We used brochures, bulletins, maps, and other materials we had gathered on our trips. Many questions were raised by students which we had not been observant enough to secure data on. Therefore our second visits in the spring were made with a much more critical eye. Trips of this sort are frequent among elementary schools but less likely among high schools where, it seems to me, they are of greater value because of the greater maturity of the students.

29. *Community Study.* Our tenth-grade social-studies classes make a study of our immediate community. Purposes of this study are to assess the quality of community services which our residents receive, to give us data upon which to support our class discussions regarding improvements which might be made in our community, and to draw students' attention to a critical evaluation of their community. Ours is a large city, and our study is of the immediate community within this city. Therefore the factors which we study may be somewhat different from those which would be studied in a smaller independent community. However the technique could be used anywhere. We spend a considerable amount of time in class discussing the factors which we want to study and in devising a check list upon which to record our observations. We then use this check list experimentally for an hour or two and bring it back to class again, subjecting it to careful evaluation and revision. We discuss also the method of making judgments where a rater's opinion rather than objective data may be called for.

We divide the community up into sections and give a section to each committee of three or four—every pupil of the class is involved in getting the data. Our check list usually calls for such information as type of neighborhood (commercial, residential, industrial); type of houses (apartment, private, two-family, walk-up); condition of streets, homes, walks; type and condition of stores; recreational facilities; manufacturing plants and their types (clean, dirty, quiet, noisy); street sanitation; traffic conditions; civic protection (fire, police); transportation facilities; hospital facilities; health facilities (doctors, dentists, health stations, social agencies); churches; and schools (condition of plant, accessibility, location).

30. *School Building Survey.* In connection with a study of our school building facilities our seniors made a study of lighting in school buildings. Many of our buildings are quite old and the intensity of the lighting varies greatly. The pupils employed light meters and made readings in various parts of each schoolroom. They recorded light intensity and distribution on special forms which were prepared for the study, and then on a large plan of each floor of each school building they indicated by appropriate shading the variations in light intensity in the various rooms. They studied current literature on the subject of lighting to set up their standards for judgment. Their findings were incorporated into the com-

prehensive study of buildings which was being made, and it showed that our lighting was for the most part unsatisfactory.

This activity served two purposes, both important: First, the administration received valuable help in the collection of needed data; second, the high-school seniors, who will become voting citizens before long, gained some new insights into school building needs in our community.

**31. Securing Firsthand Social-studies Data.** Every year in my senior-high-school social-studies class we do at least one project involving the collecting of original data. After the class has secured sufficient background in one of the units which we study, we culminate this unit with such a practical project. One year we studied housing. Our unit on housing had contained a great deal of material (secured from a wide variety of pamphlet and magazine references) on housing conditions, how to classify housing facilities, how to judge housing developments, and so on. We surveyed the housing conditions in our community firsthand. Since a normal-sized class numbers sufficient field workers, the data in such a survey can be collected quite readily and speedily. The data were treated in terms of percentages in respect to each type of housing classification and eventually were projected on charts and graphs and maps of the community. Another such study in another year was on employment. In still another study we surveyed the nations of origin of the people of our community or of their ancestors. This particular study was conducted on a sampling basis and gave us an opportunity to study the methods and assumptions of sampling surveys.

**32. Evaluating Magazines.** In talking about magazines one day the students of my junior-high-school class decided that it would be a good thing to develop some standards by which magazines could be judged. For some students told about magazines and said they were good, while other students said these same magazines were poor. We developed standards touching upon paper, format, printing, quality of illustration, type and quality of stories and articles, type of advertising, sincerity of general content, authenticity of content. After this list was developed, pupils brought in magazines to be judged by this set of standards. Each magazine was judged by at least three different pupil-raters chosen at random. At the same time I secured some magazines from the public library which were not represented among those the pupils brought in,

because I wished to introduce them to better periodicals which they apparently did not know about. Interestingly, the pupils' ratings of poor, fair, and good on the various counts were quite close to what I would have given.

33. *Studying Motion Pictures.* We have a senior-high-school class in motion-picture appreciation that grew out of studies of the drama in English. The pupils learn to distinguish a better movie from a poor movie through discussion of actual pictures. They discuss acting, photography, story, sincerity, purpose. They compare their discussions with the writings of motion-picture critics, differentiating those which appear in cheap movie magazines from criticisms in better newspapers, magazines, and the Motion Picture Research Council's *News Bulletin*. Other reading material to supplement the actual viewing of pictures has been secured by students in successive classes—through searching in the *Readers' Guide* and through building up a library collection of books on the motion picture. In their discussions they gradually learn to place less emphasis on the publicized star and more on the director and writer. Most of the source material—the motion pictures viewed—are those which appear at local theaters, although earlier classic movies have been secured from various libraries which distribute them for viewing in class.

As a part of their study of the motion picture pupils are given demonstrations of the camera and projector by the director of audio-visual education. Also they have secured copies of motion-picture scripts for study and comparison with pictures. Near the close of the term individuals and groups of pupils try their hand at writing a movie script.

Since we live in an age when movies are a predominant form of entertainment, it is highly important for high-school youngsters to be able to judge motion pictures.

34. *Testing Recipes.* Our home-economics girls felt that many of the recipes and suggestions in magazines and newspapers were probably good and many others probably were not. Several girls asked if they could form a group to carry on some testing and have a portion of the foods room as a little testing laboratory. The members of this group each undertook a small research problem in the investigation of recipes and food suggestions made in magazines. After each testing they judged the recipe on how well it turned out and reported to the class on their

results. Those recipes which turned out most satisfactorily were placed in a file to be used for home and school cooking. Meeting together, this little experimental group attempted also to formulate criteria by which suggestions appearing in magazines could be evaluated on reading without the necessity of resorting to experiment in each instance.

35. *Concepts in Physics.* The idea of moments in physics can be presented in the form of balanced levers, the student varying the loads and the position of the loads. Bernouilli's principle may be illustrated by blowing (with a spray gun, or an atomizer) over the upper surface of a paper supported by a pencil held lengthwise under one end.

36. *Wind Tunnel.* A discussion of aerodynamics principles in science class resulted in a group of boys' making a wind tunnel as their project in shop class. A piece of sheet metal was bent into a tube about eighteen inches in diameter at the larger end and soldered along the seam. It was equipped with an interior light and a viewing panel of transparent plastic. A rod to hold model planes and airfoils was passed to the outside where it could be manipulated. It operates very well with an ordinary electric fan which fits snugly at the larger end of the tunnel. Models and airfoils of various shapes and contours were then carved from wood to serve experimental and demonstration purposes. The wind tunnel has been so successful that it is now a permanent part of our science equipment.

37. *Measuring Light Wave Length.* Students in my physics classes measure the wave length of colors with a diffraction grating. The only associated apparatus used is a slit, and the method is so simple that most of them can readily accomplish it. Sources of light used are neon lamp, argon lamp, sodium flame, and various colors chosen from the continuous spectrum of an ordinary tungsten-filament lamp. I do not give detailed directions but let students manipulate the apparatus, drawing upon their knowledge of principles already studied.

38. *Analysis of Radio Advertising.* I have used a wire recorder to take radio commercials off the air so that they may be used in class analysis. We play back a number of commercials, noting and comparing each, and analyzing them for appeal. We attempt to discover whether the argu-

ments given are based on acceptable evidence, whether the reasoning is logical. We find that many are based upon emotional appeals and tricks of speech. We have developed a classification system so that each commercial can quickly be labeled as "emotional appeal only," "based on trick of speech," "pretense toward scientific evidence," etc. And there are of course others which we can classify as sound.

# Practice 9: COOPERATIVE GROUP ACTION

*Providing Pupils of Different Points of View  
with Practice in Getting Together on Jobs  
Which Have to be Done*

*Use This Practice to . . .*

- d. Develop desirable character and personality in pupils.*
- e. Develop good citizenship.*

As LONG as there are two people on earth there will be some disagreement. The more people, the more groups, the more nations—the more disagreement. Certain well-worn couplings will serve to illustrate: capital and labor, city and country, farm and factory, Republican and Democrat, east and west, north and south. But the important fact about getting the world's work done is not the differences between groups but the fact that they can get together. Even the United States led a precarious early life because of the marked differences within its borders. These differences came eventually to mean strength. But differences are being emphasized again—not only in our country but in the world. Either the differences are more numerous or more complex than they ever were or men are losing skill in the fine art of getting together.

*As a teaching tool, Cooperative Group Action is a means of teaching pupils of divergent viewpoints the fine art of getting together for mutually beneficial action.* No skill is more greatly needed today. Why should we be surprised that representatives of employers and employees can sit down on two sides of a table—even with government representa-

tives as referees—and argue so long without coming to agreement? Who taught these men, after all, the fine art of compromise? They certainly never learned it or practiced it in the schools they went to. To that extent their education was incomplete—and we feel the effects.

*Most schools provide an excellent laboratory for the practice of Co-operative Group Action*—all except schools that are very small or schools in the most homogeneous of communities. In most communities today there are differences, and these differences are reflected in the school. In the school are cliques and groups—the accepted ones, opposing factions, those taking one course, and those taking another. Most administrations try to suppress these differences or close their eyes to them. Actually, however, such differences present a fine opportunity for the practice in schools of the skill in question.

There are numerous instances today of intergroup misunderstanding. Most of these penetrate into the school. Most of the misunderstandings are accentuated in schools which do nothing with Cooperative Group Action. Even in the operation of a student government—if it is a real one—there are strong differences of individual opinion. But if a student government is to function, individual differences must be resolved. A school which makes use of Cooperative Group Action has numerous student committees, many clubs, many group projects in school and classrooms.

*Individuals are not born with the spirit of cooperative action—it is learned.* Pupils must have many opportunities to give and take ideas through group organization. They must have practice in submerging competitive desires in a drive for the general good. Close, active associations with one's fellow human beings can result in intergroup understanding. Students successfully working together have to learn to pool their ideas, learn to listen, contribute, think in terms of others, criticize constructively, get along with others, and be accepted. We in America once fought and worked as groups. We fought the wilderness and foreign governments. We settled a continent. We built our neighbors' homes. That physical cooperation must now reach over into the intangible area of understanding and agreement. An important place to learn to do this is in school.

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. A person learns only by his own activity. (See Reason 1, Practice 8.)
2. Firsthand experience makes for lasting and more complete learning. (See Reason 2, Practice 8.)
3. Participation enhances learning. (See Reason 2, Practice 7.)

### SOCIETY SAYS:

4. A common culture requires of its members a common set of skills. And one of the most important of these skills is the ability to get together. Especially is this true in a nation made up of people from all over the world, from every background and culture. In many communities people of different ethnic and cultural groups have to pull together just to get a street paved.
5. The resolution of differences is the greatest task today. Nationally and internationally this is true. Individuals differ; so do groups; so do nations. However much we take account of individual differences, we must—and in a new way—take account of individual and group similarities, in order to go about the task of fitting individuals into a cooperative society.

6. The school is a simplified version of society. The conflicts of society penetrate into the school because the modern school is breaking down the barriers between itself and the world. These conflicts will either rend the school as they do society and make the school less efficient, or the school will use them as practice material for teaching the arts of Cooperative Group Action.

### SAMPLE PRACTICES

The sample practices for this section are classified under the following headings:

1. All Age Levels
2. Lower Grades
3. Middle Grades and Junior and Senior High School
4. Junior and Senior High School
5. Senior High School

## ALL AGE LEVELS

1. *Training in Committee Work.* Democracy generally functions through the work of small groups or committees which in turn are responsible to larger representative bodies. Many examples of committee work can be found in our government, at national, state, and local levels, as well as in the various agencies and societies of which individuals are members. The classroom, the primary unit of the student-body organization, can become the laboratory by means of which the student is introduced to the requirements for effective participation in committee work.

Before committees are formed for the purpose of carrying on class, club, or student organization work, we spend a considerable amount of time in our high-school social-studies classes emphasizing the values to be gained from committee work. We point up responsibility and leadership. The first is to make the student aware of his responsibilities both to the small group of which he is a working member and to the larger representative group which has placed him on this committee. The second is to stress the importance of capable leadership and the characteristics which mark the good leader.

To aid the members of the various committees to understand their obligations and responsibilities the following relationships and techniques are reviewed: (a) The committee member must pledge himself to work for the benefit of the larger group; (b) He must be honest and thoughtful in any work he does for the group or any statement he makes before the group; (c) His statements must be well organized in presentation; (d) In committee meetings he must stick to the point, talking only about related subjects; (e) He must serve on his committee with sympathetic understanding toward other members whose points of view may be contrary to his own; (f) In trying to convince others he must respect their right to a different point of view, and in arguing he must use facts instead of emotion to win his point; (g) He must be able to compromise, if necessary, to secure a final committee report.

I have had some excellent results as well as failures—judging from the quality of work done by students on class, club, and school committees. Even some of our elected representatives (professionals at the game) are failures in this sense. Pupils make mistakes in spelling. We should be just

as willing to accept failures in citizenship and character development, which are much more difficult and require a longer time than spelling.

2. *Building Generosity.* During December we read many stories, such as "Cosette" (adapted from *Les Misérables*) and Dickens's "A Christmas Carol," which show the satisfaction that comes from sharing with others, especially the less fortunate. We discussed these points and the suggestion was made that we do something for some one else at Christmastime. We selected an orphan girl in a nearby hospital for crippled children who had had polio. (I think it is very important for the purpose that a specific person be selected as the recipient of the children's generosity; the object is more definite than in giving to some "cause.") The children collected the money, chose the presents, and wrapped them. A committee was elected to go with me to present the Christmas gifts, since there were too many of us for all to go. While there the committee enjoyed a Christmas party at the hospital, and they also had an opportunity to talk to a boy in an iron lung about whom they had read in the local newspaper. Their report of their experiences and the ensuing discussion convinced me that all had received value from the contributions which they had made. Thus giving had its reward.

#### LOWER GRADES

3. *Our City.* The boys and girls of our second-grade room have organized the room as a city. They consider themselves the citizens of this city. We have a mayor, a city clerk, a nurse, a doctor, a street commissioner, a housing commissioner, a chief of police, a milkman, and a radio announcer.<sup>1</sup> Each of these democratically elected officers has regular duties in the room related to the title of his office—from the radio announcer's early-morning news to the milkman's collecting for mid-morning milk. Much of the activity in the room is carried on as a part of the activity of our city.

The mayor presides over the meeting of the Citizenship Club, which is conducted in the manner of a town council—with all of the citizens attending, however. First, all citizens give the creed, which was developed

<sup>1</sup> The authors are somewhat dismayed that these youngsters found no need for a board of education.

by the children in the manner in which experience stories are developed: "We are citizens in a democracy. We must act as good citizens. We work with others. We work for our families. We work for our classmates. We work for a better school. We work for a better place to live. This is the American way."

The city clerk reports the minutes of previous meetings. The nurse reports on such things as the condition of children's fingernails. The doctor reports on how many children are home ill. The street and housing commissioners report on the condition of the room and of children's desks. The chief of police reports on the general conduct of the children. The mayor calls for any general reports of good deeds.

With this warmup lengthy discussions usually take place when new business is called for. For example a game at recess did not turn out as planned. Why? Was it because the teacher was detained and couldn't be present? They are getting old now—fully seven years old—couldn't they take care of themselves without the teacher having to be there? They discuss several possibilities—such as letting everybody play what he wants to, and then finally, and without any outside help, decide that every person must play the game planned for the recess, unless he reports to the leader beforehand that he intends to play something else.

This ability to take care of themselves is something that has come about through practice, yet fairly rapidly. Even second-graders can engage in cooperative group action of a high order concerning the management of affairs which touch them most closely.

**4. Group Discussion in a Sharing Period.** I use the things which children have made during their creative activity period to encourage group discussion among primary-school children. The device is the fairly common "sharing period" to which each youngster brings something that he has made. We gather around in as tight a semicircle as we can. I call attention to some child's work—such as a sailboat which he has built which has no sail. He tells about his sailboat and how he got stuck trying to make a sail of Plasticine. I ask others what suggestions they have that might help him. Some child gets to the heart of the difficulty and suggests a cloth or paper sail. Invariably a problem which has stopped one child is clearly discerned and solved by some other child who is able to look at it in a different light. Even little children are able to engage in careful thinking in terms of a real problem. The children enjoy these sessions not

only because of the opportunity to display what they have done, but because they are able to secure help from others. When a good suggestion is made and approved, the child who gets the help acts upon it and at a later sharing period displays the finished result—the successful conclusion of an act of thought.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

5. *Cleaning Up the Town.* The Village Improvement Society became much concerned with wastepaper scattered over the town. It seemed to imply that elementary-school children were largely at fault. A group of elementary-school children discussed the situation and then met with the Village Improvement Society. They pointed out certain measures which should be taken to remove the difficulty: They recommended that trash cans be placed at certain spots—playgrounds and other places which children frequented. They pointed out that guards of some sort ought to be placed over the light bulbs on certain streets and bridges to prevent breakage. They said that the regulations concerning paper collections from stores, amusement places, and bus stops ought to be studied carefully. They even visited a neighboring town to learn just what regulations were in force there and how successful they were. They wrote a letter to the railroad company to find out whose responsibility it was to take care of wastepaper collecting in the tunnel under the railroad. Their suggestions, put into effect, greatly improved the cleanliness of the town.

6. *Student-run Assembly.* The student-government organization runs every assembly which is held in our school. All assembly programs are planned by the president and his assembly committee, including the issuance of invitations for feature speakers, the meeting and entertaining of these speakers, and their proper introduction. The principal of the school is very seldom present at assembly.

The purpose is, of course, to give students practice in cooperative group action, and the assembly is used as a means. Neither the principal nor any other faculty member offers any help unless asked, or takes any responsibility for the assembly. The only thing which the students do not control is the schedule—when an assembly is scheduled it is held. If assemblies are good or not good everyone knows whom to credit. They are therefore generally good.

7. *Correcting Assembly Discipline.* At an assembly devoted to group singing the students gradually became more and more disorderly and were dismissed by the teachers in charge. Subsequent assemblies on the schedule were cancelled. The students of one of the classes were somewhat disturbed over the incident. This had certainly not been a satisfactory occurrence; it represented a problem that needed solving which involved pupils' social attitudes toward each other.

Part of the class volunteered to work on the problem. First these students did some reading on school assembly programs. Then they interviewed students and teachers. They talked to the director of assemblies and to the student committees in charge of assembly programs. The general theme of their study was: How can our assembly programs be improved for the benefit of the whole school? They came to tentative conclusions: The programs had not been sufficiently interesting; not much time had been put on planning assemblies; unsocial attitudes had been shown in other situations by some of the ringleaders in the disturbance; and the assembly period needed some improvement in its organization.

The group secured permission to present its findings to all the students and teachers assembled. A forum discussion was held. Views were interchanged among students and faculty. Recommendations were arrived at resulting in greater participation by students and teachers in preparing and enjoying programs. The Assembly Committee began to make a more formal study of program principles instead of "just finding something to put on." All students agreed to cooperate, whether as producers of programs or as audience, and assemblies were rescheduled with almost perfect order.

8. *Contributions of the Negro.* Our school undertook a project to express its appreciation for the contributions which the Negro had made to American culture. The idea originated in a statement by a Negro student that he could never expect to amount to much because he was a Negro. The school set out to show the student and others of his race, as well as to inform the whole student body, that any Negro might well expect to amount to something because other Negroes had. Prints of the work of Negro artists and portrait photographs of famous Negroes were put on exhibit, books by Negro writers and books about famous Negroes were featured in the library, and programs of spirituals and other Negro music were featured in assembly programs.

9. *Recognition Banquet.* At the close of the school year our student council holds a banquet to accord recognition to those students who have served ably on some major school-service committee: Corridor, Lunchroom, Traffic, Fire, Courtesy, and Stage-lighting Committees. The banquet is held in the evening in the school cafeteria, which is arranged like a banquet hall with a speakers' table. Girls of the home-economics department prepare and serve the meal. The president of the student council presides. Guests are former student-council presidents, the principal and superintendent, the president of the parents' association, and some outstanding speaker of the town. Guests of honor are of course the members of the service committees, who are accorded special recognition through an appropriate short speech delivered by a pupil.

#### JUNIOR AND SENIOR HIGH SCHOOL

10. *Youth Works Together.* This organization originated in an English class in our senior high school when the students were discussing some of the problems of intercultural relations. One of the features of this English class was a forum held each Friday for discussion of teen-age problems and any other problems which occupied the students' minds. During one of these forum sessions some of the students said that they were tired of talking about these problems; they wanted to do something about them and especially to improve human relationships among young people.

They got together in several meetings outside of the class and named themselves Youth Works Together. It was a small group to start with but it publicized its intentions and soon a large number of young people—Protestant, Catholic, Negro, and Jewish—had joined the group. They undertook a number of specific projects:

They planned an assembly program on intercultural relations with films from the National Conference of Christians and Jews.

They brought their influence to bear in one local case of discrimination against Negroes and felt that they helped bring about a happy conclusion.

They sent their president and one other member to represent them on the Intercultural Committee of the Community Council on Race Relations.

They began to encourage the authorities of the town to create a recreation center for young people.

A young married couple has taken over the advisership of this group. Youth Works Together is an example of the kind of leadership and action toward a better world which can be expected of young people when they are encouraged to form and execute their own plans.

11. *Campaigning for a Building.* Our high school contained 1,900 students in a building which had originally been designed to accommodate 1,000. After considering the problem the board of education decided not to put the matter up for a vote or to make any effort to secure additional building facilities. They were afraid that the public reaction might be unfavorable toward them.

A group of student leaders met to consider the matter. These leaders felt that something must be done. They drafted one or two faculty members to talk with them about it. Then they held a mass meeting of the students, persuading a large majority of them to cooperate with them in a campaign. They engaged in a doorbell-ringing campaign. Each student called upon a number of people in the community. He was armed with data to show the need for a new building and on each call sold "bricks" for a new school addition at ten cents per brick.

The brick-selling campaign raised funds to finance a publicity campaign. A circular was prepared by the students and thousands of copies distributed. Student leaders called upon leaders in the community and secured signatures to a petition for a bond election. Finally a vote was held and the issue carried by a substantial majority. It isn't often that students have a hand in providing school housing for themselves or participate in so fundamental a community project. But they now feel that they were themselves responsible for the new addition to the building and they point to it with added pride.

12. *Student Court.* Student courts in general have not had an altogether satisfactory development. There are several reasons for this: First, the power to judge should also carry with it the power to penalize, or the student court becomes only a meaningless formality. But legally the ultimate penal power in schools resides with the board of education. Secondly, student judges should only pass upon infractions of student-made law, and unless there is a fairly sizable body of student relation-

ships which the students may manage as their full responsibility there is little law for the judges to adjudicate. Thirdly, student judges are difficult to manage—either they become too lenient or they become too stringent toward the culprit; they lack skill in maintaining an objective attitude.

Our student court is quite successful, and I believe it is because we have managed, in setting up the court and our student-government organization, to take account of the reservations mentioned above.

First, penalties are assessed by the judges in terms of demerits—one or more, up to ten, for any one offense. These demerits do not require the convicted offender to do anything, perform any service, or stay in after school. They are merely marks of disapprobation which he receives from his fellows. The court's findings are reported to all the classes, clubs, committees, and other activities of which the offender is a member. His immediate colleagues, in other words, are apprised of the fact that he has been judged guilty of an act which marks him as lacking in citizenship. His colleagues may be guided in their actions toward him in any way that they see fit. If the quality of his citizenship changes for the better, as evidenced by what he does in his relations with his fellows, they may vote to remove the demerits. If all of the groups (curricular and extracurricular) of which the offender is a member vote to do this, the demerits are removed from the record of the court. This is the only way in which demerits can be removed. Thus a convicted offender's own associates may perform the function of appeal.

Secondly, our student court may try infractions of student-made rules only. There are a large number of matters in connection with school planning and operation which have been delegated to the student body by the school administration as the former's sole responsibility. The student organization passes regulations governing these and the student court adjudicates alleged infractions of these regulations. These include cafeteria conduct, assembly organization and management, corridor traffic, conduct in the student room (a lounge and recreation room given over entirely to students who can qualify for the privilege), student social and recreational events, school elections, and so on. The court may also try any offense committed by a student against a student (never by a student against a teacher) except stealing and assault, which are immediately remanded to the adjudication of the school administration.

Thirdly, the judges meet once a week with their faculty adviser. This

is a real work period for training purposes. Cases of the preceding week are critically reviewed in the light of how well the judges did their work. Sometimes pupils connected with cases are interviewed at this time. What occurs in these meetings is strictly confidential.

Judges are chosen by the student-government president, the principal, and the faculty adviser meeting together. The clerk of the court, the sergeant-at-arms, and the student-body attorney (corresponding to the state's attorney) are elected by the student body at the time of the general elections. There are in all six judges, three of whom sit at a session, alternating at the two sessions held each week. We originally used a jury system but found this too cumbersome and the responsibility placed upon the single judge too great. The accused may choose any student he wishes as his attorney or act in this capacity himself. Usually members of the law club are selected for this role.

13. *Recreation Nights.* The students of our high school often promote projects designed to care for their special needs. This is one of the functions of the student council. Recently they undertook the problem of recreation. During certain periods of the school term, when other school activities are slack, the need for evening recreation has been acute in our community. After several meetings the student council proposed a plan for recreation nights.

The principal center of activity is the school gymnasium. All the space is divided up into areas in which various types of indoor games may be carried on. There are shuffle board, table tennis, darts, quoits. Card tables are provided for less active games—checkers, card games, parcheesi, Chinese checkers, and so on. The inevitable soft-drink counter is conveniently placed, and the return on this phase of the business helps pay the expenses. A committee of the student council plans, directs, oversees, and operates the entire project.

A time schedule covers the evening period from about 7:00 until 10:30. The sessions are not scheduled far in advance for definite evenings but are set up as need arises because of slackening off of other activities. Admission is by ticket only, but tickets are distributed free of charge except for a small deposit covering the entire school year. About one-third of the high-school population attends the average session.

Permission to undertake the project was granted reluctantly by the

school administration. But results have born out our confidence that the pupils can conduct their affairs satisfactorily when given full responsibility.

### SENIOR HIGH SCHOOL

14. *Interscholastic Planning.* Our student organization invited the officers of the student organizations of four other high schools near us to be our guests and participate in a discussion of common school problems. So successful was this conference that the five participating high schools have voted to make it an annual affair, meeting at each time in a different one of the five. Our students had become very much concerned over some of the problems which they were attempting to solve and felt that a meeting of minds and a variety of views from students in other high schools would be helpful.

The questions which they discussed included:

- a. "What do our schools do and what should they do to assist the new student entering from another school to make him feel at home in a new student body?"
- b. "What improvements should be made in the management and holding of school elections to make them more of an educational experience?" Each high school agreed to take several ideas and try them out in their next elections and make a report on their success.
- c. "What kind of arrangements do we have and what should we have in our community for evening student social meetings?"
- d. "How can we improve our assembly programs?"

These topics are all close to the students themselves and, in our high school at least, are among those administrative responsibilities which have been given over entirely to the students, as regards both general policy and management.

15. *Social-science Society.* Only juniors and seniors are eligible for membership in the Social Science Society. Most of them are exceptionally able persons who are interested in the problems of modern society. The meetings of the society are devoted largely to discussing current events and current problems. Members are especially conscientious about securing background for the discussions by reading the news magazines, newspapers, and other organs of current opinion. The topic for each

meeting is decided in advance so that all members will be able to discuss the issue intelligently.

The group has engaged in a number of interesting and important activities. Five members from the club were elected to participate on the adult Community Planning Council. The club requested and was given permission for such participation. It has also participated in debates on social problems with other schools. The main project is the organization of an interscholastic forum. The club participates regularly with groups of pupils, about equal in number, from six other high schools in our part of the state. In their interscholastic forums these young citizens of the country and of the world organize clear-headed discussions of many national and world-wide problems. In preparing for these discussions they probably become better informed about the problem than most of their elders. And they show that they can make constructive criticisms and put forward intelligent ideas on many of the issues that baffle the elder statesmen.

16. *Sub-debs Make Recreation Room.* A place to dance during lunch-time and a general student gathering center were needed. The Sub-deb Club decided to take over the project. What members did required a great deal of management, cooperative effort, and getting of assistance. They induced the school administration to allow them to use a former shoproom and to permit them to paint the benches, put up curtains, and do whatever alterations and decorations they considered necessary. They induced the school board to lend them the money to make a start. They acquired by various means a phonograph, records, paint, and materials for drapes and decorations. They persuaded a number of boys from the shop courses to help them make shelves, paint the furniture, put in a compartment for the sink, put up curtain rods and valences. Then they organized and staged a student-faculty basketball game to raise the money necessary to pay back the school board. Throughout all this activity the girls who had been given the permission and authority to go ahead took the whole project into their hands and carried it out without any mishaps.

## Practice 10: CREATIVE EXPRESSION

*Using a Variety of Opportunities for Much Individual and Group Expression in Many Different Creative Fields*

*Use This Practice to . . .*

- b.* Uncover and develop many different kinds of special talents in individual pupils.
- c.* Guide pupils in learning to think.
- d.* Develop desirable character and personality in pupils.

ONE of the most important movements of recent years has been the attempt to put art back where it used to be—and where it belongs. Pedagogy, blind to pictures, once seemed to think that the world's heritage was contained in the printed pages of books. Both modern life and modern education have reawakened to the cultural possibilities that lie in other forms of expression: graphic art, dancing, drama, music. In schools the creative renascence has extended to poetry, fiction, other creative writing, printing, crafts, sculpture, hand-tool and machine-tool work, woodwork, metalwork, and casting. The element of creativeness exists in all these fields—whether it is the making of a painting that is an absolutely unique thing or the invention of a new gadget or device in the industrial-arts shop.

*By far the most numerous of school attempts in the creative fields are intended to make pupils intelligent consumers of the arts. Art- and music-appreciation courses, the general school music program—vocal and instrumental—and practical arts courses that are leveled at the student of average talent are attempts of this sort. At most the arts and crafts*

course is intended to provide the student with a satisfying hobby. No one could object to this aim; even great masters, if they should appear, would need some one to understand, appreciate, and buy their work.

*The very best of schools show signs of being able to develop high artistic talent at or near the level of genius.* They have had great success in getting from pupils the very finest of imaginative and creative work. Especially is this true in the field of drawing and painting. It is less true in the fields of creative writing, music, dancing, and dramatics, though there seems no reason why these latter fields too could not become part of a general creative renaissance spearheaded by the schools.

Little of this work has been seen except by those closely associated with the schools producing it. It has been unheralded. But what some teachers have done with an ordinary school population could not others do also? There is no evidence to support the view that great ages in the history of the world's art were produced because of some special physical inheritance in the population. In fact *all* peoples have expressed themselves creatively. Artistic expressiveness seems to be one of the most widely diffused of all talents. It seems present in any group of people, at any time—though it may at any time be undeveloped. It is probably present in any ordinary community, in any school, in far greater degree than we might suppose. It needs only an opportunity for development.

*What develops creative talent among those who are specially gifted?* In those schools that have been most successful there are a wide variety of media for expression, individualization of opportunity, sympathetic teaching, stimulating atmosphere, and a flexibility in the schedule which will permit sufficient amounts of time to be concentrated in creative fields. There are abundant and varied opportunities not only for expression but for performance and exhibition—not only for the most talented but for all.

*We should not view creative expression as limited to what we usually think of as the fine arts.* There is creative expression in the fields of science and technology as well. Though these fields are more highly developed in our culture than the fine arts, schools should not neglect the possibilities of developing talent there even more than they have done—especially inventive talent. It is the very rare school which has so developed its program in science and industrial arts that pupils of exceptional creative talent in these fields display these talents while yet in school to the same degree that talented student-painters do. To pro-

vide a setting for the discovery and development of gifts for scientific and technological creation among pupils is a goal which schools have yet to accomplish.

Just like in painting or music those who have talent in science or technology exhibit it early if they have the opportunity. It should not be forgotten that Edison made some of his first inventions while still a boy; Goodyear discovered a way to vulcanize rubber while still in his teens; Farnsworth was only nineteen when he invented one of the most important links in the chain of development which has resulted in television; one of the most recent contributions to helicopter flight was made by Hiller when he was not yet twenty-one; William Perkin was eighteen years old when he discovered the first coal-tar dye. But these lads were lucky. We don't know how many others might have equaled them if they had only had the proper guidance and setting in which to work. Such others may be living in your community now, going to your school.

The talent for creative expression—in the arts, in the crafts, in the sciences—is probably more widely possessed by people and by pupils than anyone in schools has yet supposed. What it needs is opportunity for development.

#### SAMPLE PRACTICES

The practices for this section are listed under the following headings:

1. All Age Levels
2. Lower Grades
3. Lower and Middle Grades
4. Lower and Middle Grades and Junior High School
5. Middle Grades and Junior High School
6. Middle Grades and Junior and Senior High School
7. Junior and Senior High School
8. Senior High School

#### ALL AGE LEVELS

1. *Creative-writing Clinic.* I have found that a free discussion among pupils about their own creative writing leads to improvement at almost any grade level. Pupils read their short stories, poems, and descriptions, after which we take time to discuss such questions as: "How did this

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. General behavior is controlled as much by emotions as by intellect. Far more than a place to train only the mind, the modern school is concerned with training the emotions also. One of the most effective teaching tools for educating the emotions is Creative Expression.

2. Unused talents contribute to personal maladjustment. Not only are unused talents a waste to society; they form a core of dissatisfaction in the individual. Frustrated talent can lead to many kinds of neurotic symptoms.

3. A person learns only by his own activity. The source of power in Creative Expression is always active. Whenever someone creates he is extremely active mentally, and his work represents for him new insight into the subject of his creation.

### SOCIETY SAYS:

4. We should try to draw out the full capacities of everyone. Great talent is needed, great originality is at a premium in the world. It is part of the school's obligation to uncover talent wherever it can be found and to develop it. No other institution has such an opportunity.

5. It is the school's special privilege to pass on the cultural heritage of the world. This has been a purpose of education since its beginning. An understanding and appreciation of great works of creation—in whatever medium—is a necessary part of education.

6. Great creative traditions develop in schools. "Schools of painting," we call them; "schools of writing," "schools of thought." The word "school" is used here in not quite the same sense as we use it normally. But both uses have this in common: people working together—under the guidance of some leader. Good schools already have the setup and the talent to start great creative traditions rolling in this country.

## SAMPLE PRACTICES (Continued)

make you feel?" "What words made you feel cold?" "Do you think this story ended too soon? Why?" And so on.

2. *Poetry Choir.* I have found that a poetry choir has many values aside from being the simplest and most expedient means for learning poetry. It also avoids the reciting of poetry in a singsong voice without appreciation of the meaning of the words. It is adaptable to any grade level.

Oral interpretation through a choir gives an opportunity for stressing enunciation and pronunciation *en masse*, which is sometimes more effective than individual corrective exercises. The outstanding advantage is that it makes the reading of poetry a pleasure to children. It develops rhythm and interpretive sense and creates an interest in the sounds of words and phrases—the ticking of a clock, the swish of the wind, the soft repetition of an echo, the deep voice of a frog.

Poetry choir is limited only by the teacher's own ingenuity in bringing children to interpret the meaning of the poems read. Children should be grouped by voice—just like in any choir. The group should not be too large for the teacher's initial attempts. The grouping should be intimate both as regards the members of the choir and the teacher directing them. Teacher and pupils together can have much enjoyment of poetry from experimenting with meanings and sounds of various words in order to make the poem mean just what the poet intended.

3. *Morning Sing.* Boys and girls do not stand outdoors in the morning waiting for the school to open. The doors are open and they go directly to the auditorium. The first ones there fill up the front seats and later ones slip in quietly and fill up seats farther back. As soon as enough have come they start singing. Teachers who are good at leading group singing alternate in this early-morning assignment and are released from other duties to compensate. The children always enjoy this early-morning sing which starts the day off well, and the procedure solves a number of problems connected with early-morning discipline.

4. *Instrumental Music.* We start very early in the discovery and development of instrumental music talent. For this purpose we use melody flutes, tonettes, fiddlelettes, and other prehand instruments for

exploratory purposes almost before pupils have finished with rhythm bandwork. As pupils grow older the possibilities for choice of instruments for study are widely varied. For example our instrumental instruction includes pedal tympani, oboe, bassoon, chimes, marimba, and vibraphone, as well as the more usual instruments taught in schools. Even the ukulele, guitar, accordion, and harmonica have a place in our instrumental music instruction.

5. *Band Tryout.* Every pupil in our school system from the second grade up has the privilege of asking for a tryout before the band instructor. If he qualifies he may borrow an instrument from the school for home practice just as he would borrow a book from the library. Regular periods of instruction are given during school hours. Groups are organized according to ability to play, and we have a number of different instrumental combinations and groups of varying ability. It is not unusual for a child with special musical ability to play with a band unit far in advance of his own chronological age.

#### LOWER GRADES

6. *First-grade Creative Writing.* A simple way to begin original written work in the first or second grade is to have a toy table in the classroom. I have one, and I ask the children to bring in any small toys they may have at home: boats, cars, trucks, busses, dolls, telephones, soldiers, animals, etc. I tag each of these with a label and place it on the toy table.

I begin the written phase of the practice by asking each child to choose a toy and tell us one thing about it orally. After a child has told his "story" about his toy I ask him to write it (in manuscript writing of course)—write it just as he told it. Words which they do not know how to write they look for in their reading books, picture dictionaries, or charts. Those who finish before others may go to the toy table and select another toy and write a "story" (one sentence) about that one. They may illustrate their stories.

After this beginning I ask them to add other things to their stories. In this way an interesting story of three or more sentences is built up. The children may make a "storybook" out of their stories and illustrations. The various parts of this practice may occupy several days or even several weeks. The children are very much interested in reading their

stories to their classmates, and many of them are surprising in their originality of thought.

*7. Rhythm-band Beginnings.* The first door to music is rhythm. Children love anything rhythmical. So I try to develop a sense of rhythm in every child. The process can be started very young, and I have also seen excellent results (as might be expected w'th more mature pupils) even at the sixth- and seventh-grade levels. We begin by clapping to music. I like to get children (after the first few times) to clapping in "choirs." That is, I divide the class into three or four sections. One group claps on every fourth beat, one on every other beat, and 'one on every beat. Or one group claps for one musical phrase, and the other group claps for the answering phrase.

Pretty soon we introduce a few crude instruments. Oatmeal boxes for drums are substituted for hands in one group. Sand blocks are made from blocks of wood covered with sand paper, rulers are used for sticks, and there are other possibilities too numerous to mention. The idea is variety, and many different kinds of percussive devices can be thought up and used.

I strive for ear-training, having the children listen for the pattern of the music and take a part that is best suited to their instruments. Each time the characteristic phrase appears in the composition they chime in with their instruments.

Later on we add other instruments that are not homemade—bells, triangles, cymbals, tambourines. The gradual addition of instruments to the bands helps to keep the interest high as much as the trying of new and more complex pieces.

#### LOWER AND MIDDLE GRADES

*8. Homemade Ballet.* Pupils of the elementary-school music and art club acted out their version of "Peter and the Wolf" for an assembly program. The recording was played and pupils took the various parts on the stage. They began by listening to the music and then reading the story and listening again. Then they took turns at interpreting various characters while the music was being played. The production was gradually built up bit by bit as various interpretive talent was uncov-

ered. The pupils have become interested in other ballet music and are now talking about doing the same thing for the "Firebird."

9. *Pantomime.* I use informal dramatic pantomime for many purposes. First, it develops creative ability; second, it builds group solidarity; third, it gives opportunities to many children at a time. Groups of children volunteer to dramatize a story or fable with which they are familiar. Children push their chairs and desks to make a ring around an open space of floor which serves as a sort of pit stage. Children sit on scatter rugs about this space, those behind them sitting on chairs, and the outer ring sitting on the tables. Necessary entrance and exit spaces are left, and simple properties are used.

A presentation is put on by a group of four or five. Each group has a director. The director develops his concept of the play by his selection of helpers, actors, properties, and action. The group meets outside the circle for a minute or two, during which time the director sketches his idea to his cast. Then they return to the stage and begin the pantomime. A presentation is usually rehearsal and performance at once, because the play is started, interrupted, criticized by the children (not carpingly or derisively, but because they have not got the point), started again (with improvements), interrupted again, and so on, until the production is perfected. When the end has been reached the cast begins all over again and this time runs it through without interruption in its perfected form. Each presentation in this manner takes five to not more than ten minutes, and in the space of a normal period every children who wants to perform gets a chance to do so.

10. *Commedia dell' Arte.* The children of my room often put on little dramatic sketches. A small group of the children at a time works at such a presentation. They prepare the stage, arrange the scenery, and improvise their own costumes. Like the Chinese stage, the property man comes in at any time to move scenery or rearrange the props, even when a dialogue is in progress.

They make no attempt to write parts. They select a story with which we are all familiar, allot the parts, and then each player "lives" his part and naturally says the lines that go with it. This makes for great spontaneity in the performance, and offers opportunity for those who are specially talented dramatically to give a convincing performance with-

out being encumbered by memorization or misinterpreted lines. This is of course the manner in which the famous *Commedia dell' Arte* troupes of Europe performed.

They do stories like "Cinderella," or select sections from social studies, or put on skits suggested by the news of the day.

11. *Bottlephone*. Lacking musical instruments, the boys made frames upon which we suspended pop bottles. The bottles were filled with water and tuned to two octaves of the scale. They were tapped with silver knife handles. The water was dyed various rainbow colors. (For Christmas we used red and green.) Two children played the "Bottlephone," one playing soprano and the other alto. The accompaniment was played on a reed organ. At first the number system was used to read the music.

12. *Box Band*. In the fall first-graders experiment with tones by means of a box band. Boxes made of various materials, of various sizes and shapes, are used as drums and many interesting tones are discovered. The boxes are covered by the children with paper on which they have drawn original designs. This is often followed by exploring and matching tones by tapping glass, china, wood, and other materials. Later bottles are filled with water to various heights and little tunes develop. The rhythm band—developed entirely from homemade materials—is their delight and joy.

13. *Acting out Musical Designations*. An easy way to teach the meaning of musical terms is to dramatize them. I have my pupils walk *largo*, *glissando*, *andante*, *allegro*, *staccato*, *legato*; P, PP, F, FF, and so on. Another exercise I use is this: I play a piece of music, let them recognize the manner of what is being played, call the term by name, and then walk that way. If a check is desired numbers may be played and terms recorded on paper. In this way the pupils who need more practice can be identified.

14. *Understanding Songs through Dramatization*. Dramatizing songs makes for better understanding of the words and better interpretation of ideas. At first the teacher sings the song and the children respond with any action they think fits the words. Sometimes word meanings must be discussed. Then those who grasp the meaning first act it out individ-

ually. Next the group decides what action and actor it likes best for each part. Later the first and second choirs sing the song while the third choir does the acting. Very good rhythm is developed in this way and a real understanding of what the song means. In addition every pupil gets in on the act and thoroughly enjoys participating.

**15. *Christmas Decoration.*** Christmas time is a time for creative enjoyment. We don't begin to use this great festival enough to make children's lives happier in terms of the spirit. Our class decided to make our room a replica of a church for the holidays, rather than decorate it with a Santa Claus setting. We made a study of church windows, hunting up pictures and other reference material. The children first made tentative window designs. Then they used brown wrapping paper and made large windows which were really beautiful with their many colors of stained glass, their figures and designs. We put the round rose ones above the blackboards and the long Gothic ones around the blackboards at regular intervals. Using power paints we painted the windows of the doors of the room to represent stained glass windows. Also we used large white candles and green candle holders for further decoration. During this project both teacher and pupils learned a great many interesting things about stained-glass windows, and our room became a lovely setting in which to enjoy the holiday season.

**16. *Art Seatwork.*** We sometimes wonder how we can find the time to let a large group of pupils do any creative work in artistic media. For this purpose I capitalize on the seatwork time allotment. Instead of constantly using pencil and paper and reading types of seatwork I more frequently have pupils use materials for painting, clay-modeling, paper-sculpturing, crayon drawing, and chalk drawing. These materials are easily kept at hand in orange-crate shelves ranged around the room below the chalk rail. Children quickly learn to get the materials and put them away properly. Since we do not have enough of every kind of medium for every child who might want to work in that medium, we work in rotating groups of seven or eight. There is enough material in each medium for each member of the group to work in that medium for a day.

## LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

17. *Studio Club.* Some children like to write because they have something to say. These children should be given an opportunity to write for other reasons than to fulfill an English assignment. We have arranged a room in our school which looks more like a studio than a conventional schoolroom. It is used for a number of purposes, but our Writing Studio Club meets there. Any child from any grade or class in our elementary school may come to this room at stated periods several times a week for writing guidance and enjoyment. Writing and sharing a common interest with other children of various ages have developed a fine spirit within the club, and many fine things have been written by the pupils. Sometimes the members spend the whole time silently—writing individually. At other times they gather around a long table and read and discuss what they have written. There is an appreciation of what others contribute—no matter what their ages may be—and genuine pleasure is evident when a member has made outstanding growth.

18. *Fiction Book.* Cooperative writing of stories is fairly common in the lower elementary school, as in the writing of "experience stories." But it is less common in the upper grades. My eighth grade develops a "fiction book" each year. Through oral discussion the class first decides upon the type of story, names and types of characters, skeleton story line, major plot incidents, and number of chapters. The class then divides into groups to write the book. One group does the first chapter, the second group consulting with it carries the work on into the second chapter, and so on, until all the chapters are written. Each group presents its work to the class daily for criticism and alterations. Each chapter is checked by another group for English errors, misspelling, punctuation, and is rewritten if not satisfactory. Each chapter is typed as it is completed, with spaces left for illustrations. These are added by the group selected to do illustrations. This group has meanwhile been busy on the cover. Finally the book is assembled.

The book which my eighth grade did called "The Adventure of Santa Claus" made interesting reading—even for adults. The project requires a high type of cooperation and coordination.

## MIDDLE GRADES AND JUNIOR HIGH SCHOOL

19. *Making Music.* An interesting tie-up between music and shopwork in our elementary school is the practice of having children make their own musical instruments. Following simple directions they can make zithers, xylophones, flutes, drums, cymbals, banjos, violins, and harps. I find a child much more interested in learning to play an instrument that he has made himself. The best of these instruments used by the best of the performers on them are then organized into a little orchestra to accompany piano or singing. Each performer has a few simple chords or notes to play in the piece, so that the performance is like that of a more highly developed rhythm band.

20. *Xylophone Band.* There are about a hundred boys and girls in our Grades 5 and 6 who make up the xylophone band. To get into the band each pupil has to make his own instrument. These are of wood, are simple to make, and cost less than a dollar per instrument. In our music program we like to have as many different kinds of musical activity as possible, not limiting experiences to a glee club and conventional band.

21. *Music Appreciation.* This is the way I approach a new piece of music in a sixth-grade music-appreciation class. On the front board when the class enters is a poem. We read this poem together and then I ask the class to tell me how such a piece makes them feel—what mood they would have expected the author to be in as he wrote it. This leads to a discussion of the different ways in which people express their feelings—in painting as well as in words. I show for comparison two paintings—one that is quite austere and bleak in character, one that is sunny and pleasant. And we discuss further what these two paintings mean to the feelings.

Then I point out that these same feelings can be expressed in music as well as in painting and in words. I tell them that I am going to play for them a piece of music that expresses the same kind of feelings as the bleak and austere painting and play for them Sibelius's "Finlandia." We make no attempt to dissect the music, but following the playing there is always some discussion bearing upon what they have heard and what it means.

22. *Making Christmas Presents.* This term my sixth-graders decided to make their own Christmas gifts for their families. They brought from home all the discarded things they could find, such as wood, clothing, rags, buttons, beads, pieces of oilcloth, and leather. These articles were all pooled. Each child made a list of the people to whom he wished to give gifts. After considering the material we had we decided upon certain gifts that we might make. In order to have time for this work the class formed an Arts and Crafts Club which met two afternoons a week. The average amount of money each child spent was twenty cents. In all, the children made about two hundred articles, besides fifty portfolios containing envelopes and writing paper for soldiers in the hospital nearby.

Among the gifts they made from discarded materials were ash trays, trays, toys, clothespins, doorstops, tie racks, bookshelves, book racks, paper animals, knitting boxes, scrap baskets, stamp-book holders, coasters, powder bags, change purses, aprons, cloth potholders, pin cushions, pillows, table covers, and doilies with linoleum-block and potato-block print designs. They also made vases from enameled bottles, painted flowerpots, and many Christmas cards.

The children had a great deal of satisfaction from creating their gifts themselves and learned the value of conservation.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

23. *Book Reports.* The pupils of my upper-elementary grade may choose any of a number of ways of reporting on collateral books they have read. They may read an excerpt to the class—a funny paragraph, a vivid description, or an exciting part. They may write a short play about what they have read and give the play with the aid of classmates. They may write a characterization of an interesting character, having him do something not in the story, but still remain in character. They may sketch a "story board," or series of illustrations telling the story *à la* comic strip (or use clipped illustrations if they are not able to draw well enough). Pupils are encouraged to use the type of report which is best suited to the story they have read.

24. *Homemade School Song.* Most schools, and colleges too, are insufferable "copycats" when it comes to school songs. But this does not have

to be—any school population will, some time or other, contain a pupil or two of sufficiently outstanding talent to write a school song as good as any that can be borrowed. The important thing is to be on the lookout for such talent. Our school had such a student not long ago. He wrote the music and another pupil equally talented in verse wrote the words for our school song. We are continuing to look for such talent, for there is no objection to having more than one good (and original) school song.

25. *Music Listening.* The ability to listen intelligently to music is a creative activity. Producing original music or playing instruments or singing are not the only avenues to responding creatively to music. We use our phonograph extensively during our music-appreciation sessions; we do much more listening to music than talking about it. Program music makes, of course, a very suitable introduction to the skills involved in listening to music. We listen to such compositions as "Nutcracker Suite," "Peter and the Wolf," and "Carnival of the Animals," which have rather obvious stories. We listen and attempt to spot the various events in the story from the music we are hearing. We use many contrasting compositions: "On Wings of Song" and "Golliwog's Cakewalk," or "The Swan" and "Danse Macabre." Innumerable contrasts in mood could be used.

We also listen to various compositions on the piano. Although we listen for something the atmosphere of the class is one of enjoyment and spirited interest. We may listen for form, such as the recurrence of the initial theme at the end of a composition, or we may listen for the number of different chords used in a progression, for modulations, for major and minor mode phrases, for cadences. Other ear-training includes the distinguishing of simple intervals: octaves, seconds, thirds, perfect fifths. Sometimes we listen to a piece, without the composer or his period being given, to see if we can identify the composer or his period from the style of the piece.

#### JUNIOR AND SENIOR HIGH SCHOOL

26. *Modern-dance Club.* We do not usually think of interpretive dancing as having a part in the school's creative arts program. It may be because we think of dancing as somewhat foreign to America. However, it is not; for a century and a half in this country dancing has been a part of theatrical entertainment and folk expression. Or it may be that few teachers have taken the responsibility of teaching the dance as a means

of creative expression. As a physical-education teacher I have felt that dancing is an integral part of my field of teaching and have consequently been quite successful both in developing an interest in dancing among the students of my senior high school and in uncovering a considerable talent for dancing in individual girls. So far I have not tried to extend interest in our Modern-dance Club to the boys.

The members of the club are all chosen by tryouts in September of each year. The club meets once a week. Activities include limbering-up and stretching exercises, dance exercises, modern-dance techniques, and individual and group composition. Both percussion instruments and recordings are used. At the start I put various recordings on the record-player and have the girls move freely about the gym, executing whatever movements and steps the music suggests to them. By this means I am able to discover what girls are best suited to the different types of movement and rhythm. Gradually dances evolve. Some of the girls demonstrate exceptional creative ability in dance composition and interpretation.

We give an assembly program toward the end of the year—usually in May. For this program the music is chosen by the girls; choreography is entirely prepared by them, as well as the costumes.

*27. Saturday-morning Art Classes.* A good creative-art program can hardly operate in a high school on the rigid schedule system. What goes into turning out a piece of creative art? There is inspiration, then preliminary experimentation with the material, then an insight into a way the problem can be solved, and finally the production of the art object, with finishing touches. Can all this be accomplished in fifty minutes? Well, rarely. Of course some people can lay their work aside and come back to it, but not many of those who turn out the best things. If the bell rings at the end of step three or in the middle of step four, it's difficult to come back next day and recapture the same insight and method of procedure. Great artists did not and do not work by bells; some of them do not even work by seasons or the routine of meals. Whether an artist is great or small the principle is the same.

So I organized a Saturday-morning art class. I sold my idea to the administration and got other time off in return for the privilege of holding my two most talented high-school art classes on Saturday. Because the students, being talented, were interested in art as much as any other

thing, they liked the idea too. Their full weekly stint of four hours of art, instead of being taken in fifty-minute doses five days a week, was accomplished in four solid hours between 8:30 and 12:30 on Saturday morning.

28. *Color Experimentation.* I give my ninth-grade art classes wide opportunity to experiment with colors. Tubes or jars of the three primary colors are given to the pupils and they are allowed to produce other colors from these empirically. Up to twenty new colors have been produced in this fashion through combination of the basic colors. A color chart has been pinned to the bulletin board for comparison. In discussion we note the similarity between color combinations and the basic tones in music.

As a next step I encourage the pupils to experiment with the producing of unusual shapes from these colors—either representations or abstractions. Some very unusual results are obtained. The final phase of this experimentation is the combination of colors and shapes in the expression of moods and states of mind: sadness, happiness, anger, storm, fire, war, and so on. The results secured by the pupils are compared with color reproductions of paintings to determine the extent to which a recognized artist used the same combinations to express mood and meaning.

29. *Motion-picture Producers.* Our high school has a motion-picture club which has produced over fifteen amateur movies. The first two were of the newsreel type, showing typical school scenes. Then we filmed an original comedy from a script written, produced, and acted by the students. Later on we did a teaching film in color to show the water supply of our town. This has been used widely in our classes and has circulated to other schools. On two occasions we produced a movie to supplement commencement exercises. One was the usual prophecy, showing what class members would be doing ten years from now—but given a brand new twist. Among other productions were a filming of the seventh-grade operetta, a public-relations film entitled "Education in Our Public Schools," and various films recording interesting and important events at the school.

This work started as an extracurricular activity. Funds for it were raised by the students. The services of the audio-visual director and of the dramatics director are used by the club. As an outgrowth of interest

in the club our school has introduced an elective in motion-picture appreciation.

30. *Designing Equipment.* We generally think of creative expression as something involving paints, or music, or writing. There is probably more creative expression going on in our society in the field of science and technology than in those other fields where we place most stress for creative work in schools—important as these other fields are. Two boys in our high school tackled the creative job of designing a piece of machinery to remove the dust near the sanding machine in our shop.

Drawing on their knowledge of airplane-engine superchargers and using the skills they had learned in mechanical drawing and sheet-metal work, they designed an oversize vacuum cleaner to do the job. They attached it to the sanding machine, and it has given excellent service ever since. The plans they drew up were turned over to the other members of the class for fabrication.

This is typical of what can happen in any school when skilled students are given an incentive to undertake a creative job of a technological sort. There are many such mechanical imperfections around most schools, and it is highly probable that in the school there are students with the ingenuity to invent something to correct them.

31. *Oral Reading Course.* We have an oral reading course in the high school designed for those interested in oral interpretation of prose and poetry. Skill in interpreting various types of literature orally is developed through much practice and study of method. Dramatic exports are interpreted by groups, poetry and passages of prose are interpreted by individuals and groups. Emphasis is placed on meaning. Pupils get an increased appreciation of great literature, which must come alive in order to be understood, and they learn to appreciate the human voice as an instrument of expression. Experiences of this sort are especially valuable in these times when reading is taught silently for best results and emphasis in working with printed materials is usually placed upon speed rather than upon the sound of the material.

32. *Vocal Music Program.* You can do almost anything in music with the pupils of any normal high-school population if you want to organize for it and spend the time on it. Our four-part singing in assemblies is

quite unusual. Every pupil enjoys this participation, but the success of assembly singing rests on a wide variety of singing combinations which we provide regularly in the school. We have four sophomore glee clubs, three junior glee clubs, and one advanced "varsity" glee club. There is also one chorus period per week for every pupil not otherwise engaged in some form of music work.

33. *Assembly in French.* Our French class was scheduled for an assembly program. We did not want to give talks in English about the value of French and the cultural contributions of France. This had been done too often. We wanted to do a program in *French*, realizing however that only a few of the audience would be able to follow the language. We decided to select a tale with which everyone was already familiar. "Snow White" seemed the best possibility. Members of the class studied this story very carefully and then proceeded to write a French-language play version in five scenes. Various parts of the play were done by committees, and the work of these committees was unified in a few class meetings. Also we made French lyrics for the original songs. We rehearsed our production carefully for business and action to give it a real Gallic flavor. The language was no barrier. The audience enjoyed seeing a production in a foreign language the action of which it could follow quite readily because of its familiarity with the story.

#### SENIOR HIGH SCHOOL

34. *Student-managed Dramatics.* The Dramatics Club of our high school specializes in one-act plays. These plays are placed under the direction of students. The student-director receives preliminary instructions regarding staging, date of performance, and so on, and then proceeds to cast and stage the play. Members of the cast are responsible for personal props. Three weeks is usually the allotted rehearsal time. The faculty sponsor attends one rehearsal during the first and second weeks and two in the final week; but except for that the staging of the play is entirely a pupil affair. Make-up is handled by the make-up committee of the Dramatics Club—pupils who have put some special study on the subject or who are specially talented at make-up. Some of these plays are presented for assembly programs and others are presented for regular club meetings. Some are chosen for presentation to the public. A great

many more plays can be presented, a great many more students can participate, and a large amount of dramatic experience can be secured by club members through this method of dramatic-club administration.

35. *Individual Science Projects.* About fifteen years ago I began as an experiment what has developed into one of the significant science experiences in our high school. There were several boys in my chemistry class who were very good students. I suggested to them that they might like to make a working model of a sulphuric acid plant. I helped them secure necessary materials and criticized the boys' designs. They set to work and built the plant. And it worked. The next problem was to mount it in such a way that it could be used in science demonstrations without the fumes getting into the building. We cut out a portion of wall space in the corner of one of the science rooms and mounted double glass partitions instead, blocking off the corner of the room with double glass partitions on the inside of the room as well. In this cubicle we mounted the model plant where it could be observed from both the classroom and the corridor outside. We installed an exhaust fan in the ceiling. The model still works beautifully and it is in continual use for demonstration purposes.

It occurred to me that other students might be as able to produce unusual and individual work in the field of science. So the following year I issued an invitation to all who were willing to try it. I asked students to take the whole year planning and developing some science project in any field of science—biology, chemistry, physics, or any related field. The results were startling. Since then we have come to require a project of every science student each year. In May when the results are brought in we hold an extensive display in the school building. Corridors and rooms are used for the exhibit. Each project is tagged with an explanatory note (if necessary). Similar types of projects are assembled together and so large is the exhibit that direction signs are necessary. A group of judges makes awards of merit (no prizes) to projects in many different classes. The projects judged most original, or most instructive, or best illustrative of scientific principles in each class are then mounted in a special exhibit in a downtown bank lobby where they are on view to the general public, with students in attendance to explain or answer questions.

Over the years a tremendous number of highly creative projects have

been turned out by the students. As one student has put it, "I never understood electricity until I got to working on this project of mine." There have been a working model of a city water system, a working model of the human heart, a three-dimensional diagram of the brain, a gasoline-powered dynamo, a bleaching plant, an electric biological-classification chart, a model oil refinery, a wind tunnel, electric motors, explanatory charts without number (including a multiple-paneled explanation of atomic structure and atomic fission), airplane and boat models, working models of automobiles and engines, and literally thousands of other things equally good and equally exacting. This practice has objectified an aspect of science to each student; it has required him to translate his understanding into concrete form; it has enabled him to exercise a high degree of creativeness in the fields of science and technology. And in addition it has furnished our science department with an enormous number of concrete teaching aids.

36. *Literature to Music.* In an English class differing greatly in ability I tried a unit on ballads by singing rather than by reading. After the source, types, and uses of the ballad had been studied, I asked, "How would you like to sing some of the ballads?" Interest was aroused at once. We were fortunate in having two violinists in the class—a boy and a girl who were willing to accompany the group. So much did the class enjoy singing the ballads that students sang ballads not included in their text. As a climax to this unit we brought the school's recording machine into the classroom and made records. No person need hesitate in trying this because he thinks he lacks equipment. We used the crayon trough for a music rack and had only one copy of music for each ballad. If there had been no recording the experiment would still have been worth much in the interest and cooperation it created.

37. *Dramatic-literature Class.* The drama unit of my regularly scheduled class in senior-high-school English begins with some of the standard plays from the English classics and a few selected plays of more modern vintage. But instead of reading the plays as literature we "see" the plays as unfolding action on a stage. To help the students visualize the action of plays I use stage designs and simply staged action. Each student in the class takes a play to study and interpret. First he makes a paper plan of the stage for his play and the making of such a plan requires a careful

study of the play and its action. He then discusses his play before the rest of the class, sketches the story line, and acts out critical points in the action, playing all of the parts himself and pointing to his stage design to clarify how the characters are related to the setting. In the next step the student picks a cast from among the members of the class, rehearses them, as homework, and then puts on sections of the play at a later class meeting.

This approach to dramatic literature gives real meaning to a study of the drama. Words are no longer marks on a page, and poetry is seen as a device for heightening the emotional effect. The study of this phase of literature comes alive. Through this means of sharing—each pupil taking a different play—the pupils study many more plays than are usually read in a high-school class. From their experience as directors and actors in good plays they gain much skill which is of value in the ensuing part of the course devoted to writing dramatic skits and short plays. But the main thing is that pupils begin to see that plays were written to be acted and that plays can be read with greater pleasure after mastering a few of the techniques of making a play “come alive in the mind’s eye.”



# Practice 11: VARIETY OF EXPERIENCES

*Using a Variety of Experiences to Sample Pupils' Abilities and Develop Their Talents in Many Different Fields by Practice and Tryout*

*Use This Practice to . . .*

- b.* Uncover and develop many different kinds of special talents in individual pupils.
- d.* Develop desirable character and personality in pupils.

WHAT is each pupil good for? What particular contribution can he make to society? What particular talent exists inside him that needs full development if he is going to make the most of himself? One of the primary purposes of the school is to get answers to these questions. We want pupils to be of use to society. We want them to be of use to themselves. For these reasons we have developed aptitude tests. With aptitude tests we try to locate the special abilities which every pupil has.

But there probably never will be devised any set of aptitude tests which will predict with any great degree of certainty an individual's success in any given field of activity. Aptitude tests furnish only approximations. Something else is needed.

*To find out what a pupil can do the best way is to let him try his hand on a number of different kinds of projects, enterprises, courses, clubs, activities.* The good school offers its boys and girls a highly varied program of tryout experiences in class, club, and school. Their successes or failures in these furnish both pupils and observant teachers with indications of talent. The things which human beings must know how to do well in order to run the world are thousands in number. How then can a school program limited to five or six subjects test capacities for doing a

thousand different things? Does a pupil have talent for the law? Which of the half-dozen familiar high-school courses would tell us this? But in a high school with a vigorous student-government organization, a system of student courts, a law club, a series of trips into the community where courts and lawyers' offices are visited, a debating club, and other similar opportunities for tryout we have a much better chance of getting a satisfactory answer to the question. Tryout is the most realistic and reliable test of a person's capacities. The school which is to explore adequately the enormously varied talents of a normal pupil population must be enriched with many different kinds of activities, work experiences, orientation courses, and many different types of classes dealing with many different areas of human competence.

*When a pupil's special abilities have been discovered it is wasteful not to develop them to their fullest.* The same types of varied experiences are intended both to uncover ability and to develop it. In fact a good school is a gigantic twelve- or thirteen-year tester and developer of aptitude. There is practically no school, however, the offering of which is as varied as it should be to develop the capacities (of all types) of all of its pupils. Because there is not time enough in a six-hour day these offerings are often spread out into the afternoons, week ends, summers, and into extracurricular activities. But the work in the classroom itself can be so conducted that a great amount of opportunity is offered for varied experiences. In an elementary classroom, for example, science equipment, a shop table with hand tools, cooking and sewing facilities, the class newspaper, the class store, room duties, the class government organizations, the various projects undertaken in connection with studies, the story hour—all these may be viewed as devices for developing special abilities.

Among the examples described below are special types of courses and classes, clubs of numerous descriptions, orientation courses, special events and programs, special facilities and equipment. All these are cited as examples of the type of thing which good teachers and good schools are using to provide Variety of Experiences for pupils. But to be truly a tester and developer of aptitude any one school (from kindergarten through twelfth grade) should have large numbers of similar offerings.

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. Individuals differ in all sorts of ways. Each person is practically in a class by himself in terms of the things he can do well. It has never been shown that there is not at least one thing that everyone can do well. So voluminous and varied are talents that the school program must be highly varied to develop them all.

2. A person learns only by his own activity. Direct firsthand testing of talents is the best way for a person to find out—by trying himself out—just what it is that he can do well.

3. Unused talents contribute to personal maladjustment. (See Reason 2, Practice 10.)

4. Participation enhances learning. (See Reason 2, Practice 7.)

5. Abundant, realistic practice contributes to learning. (See Reason 2, Practice 6.)

6. Firsthand experience makes for lasting and more complete learning. (See Reason 2, Practice 8.)

7. The best way to learn a part in life is to play that part. (See Reason 1, Practice 5.)

### SOCIETY SAYS:

8. We should try to draw out the full capacities of everyone. No youngster should miss his chance. If he does the result is bad for the youngster, but especially is it wasteful for society. For this reason schools should be concerned with identifying and developing every pupil's talents.

9. We should teach people to do better those desirable things they are going to do anyway. The emphasis here is on the better. Testing by tryout and improving by actual practice both make for doing better those things which individuals have the talent to do, those things which some one must do well to keep our society and economy working.

10. The school should make up for the work of those agencies of informal education which have deteriorated in modern society. Apprenticeship to craftsmen, duties in the home, going to work at an early age, part-time jobs for the asking, contributing productively to the life of home and farm—these were some of the prevalent sources of testing by tryout before our society began to change toward urbanization, centralization, mechanization.

**SAMPLE PRACTICES**

The practices in this section are listed under the following headings:

1. All Age Levels
2. Lower and Middle Grades and Junior High School
3. Middle Grades and Junior High School
4. Middle Grades and Junior and Senior High School
5. Junior and Senior High School
6. Senior High School

**ALL AGE LEVELS**

1. *Hobby Groups.* Three days a week nearly all of the pupils in our elementary school take part in the following after-school hobby groups: clay-modeling, drawing and painting, sewing, music and records, dramatics, Spanish language, and stamp-collecting. The sponsors of these clubs are parents and other interested members of the public. The chairman of the parents' association helps organize the clubs and assists in combing the town for lay talent to be sponsors. Each group has three or four sponsors, making it possible to give a great deal of individual attention to each pupil, as well as taking care of the times when one or more sponsors must be absent. All sponsors have had extensive experience in the field they are supervising. For example one is an artist, another is a pianist of considerable talent, one has lived in Mexico for a number of years and speaks Spanish fluently, another has had experience in acting and directing. The father who sponsored the stamp-collecting is himself a longtime and ardent stamp-collector.

2. *Helping Children Who Lack Opportunities.* Every teacher in our school does something for the children of her grade who lack advantages and opportunities because of home or economic conditions. Generally the procedure is to select the five or six children in the class who have been denied such privileges and take them to the zoo, the planetarium, the science museum, or some other place of interest. Different groups go on different Saturdays. Sometimes the school pays the fare, sometimes the teacher, and sometimes the children are able to pay it themselves. Another procedure is to have a party at the teacher's home

to which a few youngsters are invited, entertained, given refreshments, and a little present to take home.

3. *Leisure-time Assemblies.* Most of our assembly programs are pointed toward leisure-time activities. The children love them, get many ideas from them, and the teachers find them very valuable in tying classwork to pupils' interests. The fifth- and sixth-grade groups put on a hobby assembly. Children spoke on their hobbies, telling how they happened to become interested and how they pursued them. The front of the auditorium resembled a whatnot shop, as hobbyists brought up stamp collections, tropical-fish aquariums, dolls'-clothes displays, and dozens of other diversified evidences of outside interests.

Another assembly program featured pupil "artists" who had made music their hobby. There were a drummer, singers, pianists, and violinists. Other programs included "My Favorite Radio Programs," "Books I've Enjoyed," and "Interesting Places to Visit."

4. *Pupil-made References.* During the school year I attempted to find out that subject about which each pupil knows most and in which he is most interested. Almost every child has such a subject. When we have discovered what it is we list it on a special bulletin board opposite his name. He then sets to work on his own to develop an interesting book on the subject. His own writings, clippings, drawings, clipped illustrations, anything which adds to the value of the book is or may be included. The completed book is bound attractively in a sturdy cover with the title and the pupil's name as author on the front. We then make a little ceremony of presentation whenever a pupil has completed his book. He presents it to a committee from the class which has previously spent some time examining it. He explains the subject, tells a little about his treatment, and the committee asks him certain questions about what it has seen in it or makes appropriate comments about how well he has handled a certain section. All the books, carefully labeled, are kept in a special cabinet set aside for the purpose. Any child has access to the cabinet whenever he wants to know something on a topic which one of the books has covered. Many a classroom question has been settled by consulting this collection. The pupils get from this practice a real thrill from the dignity of authorship; they feel that they have made a solid contribution to the class and to scholarship, that they have pursued one

of their own interests to an even greater degree than previously, and that classes yet to come are to benefit from their work.

5. *Corridor Exhibits.* We have a large number of exhibit cases in our corridors and individual pupils are encouraged to use these cases any time they wish to display a hobby or special interest. Recently one elementary-school boy put up an exhibit of his favorite study—prehistoric animals. Another displayed his favorite interest—Portugal. Both had collected many pictures and had made many drawings on their subjects. Other pupils were so interested that they asked to have the two boys go around to the different classrooms and give lectures.

6. *Listening Nook.* In a spare cloakroom in our old school building I set up a music-listening nook. It is just off the library. A phonograph with earphone attachments was placed there. It makes a place where children can go in spare moments to listen individually to records in which they are interested. They secure the records from the library, where they are kept.

7. *Sidewalk Art Show.* Last June near the close of school our students held their third annual sidewalk art show. The pictures, mounted and framed, were arranged along the street and around the outside of one of our elementary-school playgrounds. Walls and fences were used, and in some places movable bulletin boards were set up. The work shown came from all grades in the school system. Throughout the day students worked at clay-modeling, sketching, paper-sculpture, cartooning, and water-color and oil painting. Some made portraits of visitors who consented to sit for the young artists. It was a comprehensive exhibit, for it showed not only finished products but pupils at work.

The show was open from 10 A.M. to 5:30 P.M. and was crowded all day long. Our three art teachers were on duty all day. Parents and students assisted in putting up the show and dismantling it as well as in guiding the visitors.

8. *Humane Week.* Instead of writing essays for humane week our school staged a pet show. Dogs, cats, and every other pet, even chickens and mice, were entered. Many local citizens were invited. The event was directed and arranged by the Junior Humane Society with the help of

the physical-education teacher. Six different rings for entries of different sizes and types were set up on the playground. Ribbons were awarded to practically everyone for some kind of excellence or another. Preceding the show and between the events advice delivered over the public-address system told how to care for and handle animals.

9. *Class Hosts and Hostesses.* We have a system of class hosts and hostesses in our classroom. These duties are assigned to a single individual who serves for a week, and then another takes over. Whenever a visitor enters the classroom the host gets up and leaves whatever he is doing. He goes up to the guest, introduces himself by name, and states that he is the class host. Through experience the children have learned to be very courteous and pleasant (without being bumptious). The host inquires whether there is anything or anyone in particular that the visitor would like to see, informs the visitor that he would be delighted to show him some of the interesting things in the room. The host stays near the visitor as long as he can be helpful, answers any questions which the visitor may have, explains anything which happens to be going on at the time. On leaving, the visitor is bade goodbye and asked to return again. This system has given the children a great feeling of responsibility for the room and has also given them a great deal of experience in meeting people (especially older people) in a social situation.

10. *Spring Flower Show.* As spring flowers begin to come in we have a continuous flower exhibit up until the time school is out. Two long tables are placed near the entrance and on these children set up arrangements of whatever happens to be blooming. Some of them are extremely clever. Each day some of the vases and bowls are removed and others take their places. Since the number of places is limited children must take their turns exhibiting.

#### LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

11. *Growing Table.* The "growing table" is a real asset in my classroom. From the time we begin our unit in the fall until the close of school we have something planted in the table. Moss makes an ideal setting for the Indian study. Add a few evergreen seedlings, some small rocks and a stream, and it becomes very realistic. This basic idea can be

carried through the Thanksgiving and Christmas stories. In January units on Eskimos and fur trappers can be carried out by adding mountains, ice fields, etc. In the late winter we start bringing in violets, bluebells and any early blooming plants. They bloom in the growing table long before they can be gotten outside. There are many variations possible: cacti growing in the desert, a rock garden, a Dutch countryside, a Swiss scene, a Mediterranean scene. I have found that research is greatly stimulated, independent reading increases, in fact many valuable experiences grow out of our "growing table."

12. *Bilingual Elementary Children.* There is some feeling that America's role in world affairs means that more Americans should be bilingual. It is also probable that the best time to learn another language well is early in life. Some elementary schools are experimenting with the teaching of foreign languages:

a. In one community a special opportunity is offered primary-school children to take French one afternoon a week from 2:30 to 3:00. This is direct method, conversational French. Each parent is assessed \$1 per month, since this program is operated under the same arrangement whereby any primary-school child may also take piano or violin in the public schools for \$1 per month in group instruction.

b. Foreign-language teaching is approached in one school by the play method. A number of games are played in which no language except Spanish is used.

13. *School Farm.* Our school system is among the steadily increasing number of schools in urban localities which have acquired farms for educational purposes. A former high-school teacher is employed on a twelve-month basis to take charge of the farm. At certain times he hires a helper or two for work that is too heavy for children. Equipment on the farm includes a small tractor and a variety of hand tools. A heavy tractor is rented for heavy plowing. Buildings include a barn, chicken house, barbecue pit with adjoining shed, and a two-room building to serve as meeting and resting place for children.

Beginning in May boys and girls of the fifth grade are brought to the farm in school busses for half a day, one homeroom each half-day. Each homeroom comes about once every two weeks. The same schedule is

followed in the fall and continues until after the harvest season about November 1. The classroom teachers always come with the group.

Children dig potatoes, pick tomatoes, harvest corn, gather vegetables. Except for corn, which is for chicken feed, vegetables are divided into equal piles so that each child can take home some of each kind. There is a nursery on the farm where trees and shrubs are grown and later transplanted to school grounds in town. During the time when a class is engaged in this farm experience, work in the school is closely related to it through units on foods, plant growth, studies of farm and city life, and so on.

During the summer school busses run on the same half-day schedule, picking up volunteers at their respective schools. From 15 to 20 per cent of the pupils participate in the summer farm program.

14. *Handwork Teacher.* One of our rooms has equipment for cooking, sewing, leatherwork, woodwork, modeling, painting, block printing, metal work, weaving, and basketry. The teacher is on duty most of the time to help children and teachers do those things which can be done better with special equipment than in their own classrooms. Except when there is a rush for his services (close to Thanksgiving, Christmas, or Easter) his time is unscheduled. Teachers or pupils make requests for help direct to him. A small group or committee may go to the handwork room for special help. Several groups like this can be handled at one time, each working in a different medium. Occasionally a whole class may go.

A group from a grade studying grains may come in and corn, and make Johnnycake, or it may bake bread. Second-grade children make their own rhythm-band instruments in the handwork room. A group studying transportation may make model planes, trains, automobiles, and ships.

The handwork teacher keeps a record card for each pupil in the school. In a column for each type of activity in the handwork room the teacher makes a memorandum of date and time spent each time a pupil comes to the room. If the handwork teacher checks his cards and finds that a given child is not getting enough of a variety of experiences, he may request that the pupil be sent in for some activity. High-school shop teachers have complimented pupils who have had this experience on their ability to follow directions, their work habits, and their care of equipment.

15. *Summer Gardeners.* Early in the spring all those children who would like to try their hand at raising flowers and vegetables and who have a little plot of ground in their backyards (no matter how small) are encouraged to register in the Summer Gardeners' Club. They examine seed catalogues and place orders for seeds, which are then distributed. Children are also given trowels, fertilizer, and directions. The group holds meetings on the appropriate time to plant various seeds, proper methods of cultivation, etc. A teacher (one of the sponsors of the club) visits each garden before school is out in the spring to see how the young gardener is coming along on his agricultural experience. During the summer the youngster is on his own, except for a letter which one of the teachers writes him about "sticking with the weeds."

Early in the fall an exhibit of vegetables and flowers grown in the gardens is held. Each exhibitor writes on a card the name of the vegetable or flower and tells a little about it—such as what class it belongs to, what its relatives are, and which part of it is good to eat. The club divides into committees—one to take charge of invitations, another to take charge of arrangements, another to act as guides for visitors. The guides explain the exhibit, help the lower-grade children to read the labels, and answer questions.

The children profit in many ways from this project. They gain information about many vegetables that can be grown in this vicinity; some children see vegetables they have never seen before. Their understanding of growing things is greatly enhanced, and they gain the experience of planning and carrying out a project that lasts for many months, including the summer, a project that requires them to cooperate with the great life forces of nature.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

16. *Thirty Subjects in Elementary School.* We provide a great variety of experiences through electives in the elementary school. The large part of the day is of course taken up with common core studies. But pupils of the sixth, seventh, and eighth grades have an opportunity of electing two subjects, each of which meets twice one week and three times the following week. All of the electives are offered during a regular elective period of fifty minutes. They are band, orchestra, piano, dramatics (four classes at various levels of advancement), drawing and painting, girls'

glee club, boys' glee club, hostess group, knitting club, leaders' course (for the eighth grade only), library course, model-airplane club, creative-dance group, officials club, student cooperative council, general-language course, audio-visual club, creative-writing group, Red Cross, speech club, stagecraft group (both beginners and advanced), wood-carving, crafts, typewriting, stamp club, boat-building, and several remedial groups (penmanship, mathematics, spelling).

17. *Extra-work System.* On Tuesday, Wednesday, and Thursday between 10:30 and 11:30 all children of grades three to six have an opportunity to do extra work in fields in which they are especially interested. If a child has become especially interested in science and wants to do further work in some particular phase of science, or carry on experimentation of some kind, he may go to the science room for this hour. The same arrangement exists for music. The music studio with the special music teacher is ready to receive those who are especially interested in doing something in music that goes beyond what regular music classes are able to accomplish. The same is true of industrial arts, painting, drawing, plastic arts, and library reading. Each child has a chance to explore his interests and develop his special abilities under highly competent guidance. The work usually proceeds on a much more individualistic and informal basis than regular classroom instruction.

This arrangement runs for six weeks, at the end of which each child elects to do extra work in some area other than that in which he has been working. Teachers try to see that the program of any given child is balanced as to the fields of work undertaken over a period of a year or two, with two exceptions: A child who seems especially to need the kind of contact he gets with a particular teacher or a particular subject for the sake of his own personality development is permitted to continue in the same field for considerable time, if that seems wise; a child who shows exceptional skill and promise in a particular field is permitted to advance himself in this field over a period of considerable time if his interests are exceptionally strong.

18. *Tools on Loan.* All boys of the sixth, seventh, and eighth grades have basic woodshop experience using tools for simple construction and repair. During the course each boy selects a project. If, for example, it is a boat model and he does a good job with it, he may join the model-

making Boat Club which takes much time outside of class and school. For purposes of making models connected with the work of this club a student may borrow tools from the school shop in the same manner as he may borrow books from the school library. Other clubs which tie into shop function similarly, both in terms of the facilities made available to youngsters and in terms of the progressive degree of skills required in different fields. The Boat Club gives an annual regatta in which each boy enters his own boat in its class.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

19. *Experience through Clubs.* Our clubs are organized to a large extent on demand of students; when a sufficient number ask for a club, one is organized. We make a practice of having as rich a club offering as possible, for this is one of the very practical ways in which much teaching can be done that ordinarily would not be part of regular classwork. The Maritime Club studies the history of ships, life in the Navy, sea stories, and movies about the sea. The Bridge Club offers an early start on the mastery of a game which is also a useful social tool in later life. Members of the Child Care Club go into homes in the community to care for children and, in addition, study child care in their meetings. There are the Aviation Club, Dance Club, Writing Club, Collectors' Club, Hooked-rug Club, Harmonica Club, Poultry Club (even in our urban community), the News-writing Club, Nature Club, Chess Club, and Poetry Club. The organization of such a highly varied club program came about with the appointment of a faculty committee to study our club program and develop recommendations (drawn also from the pupils) which should govern the development of a useful, stimulating program. These are two of their recommendations: The club program should provide for those useful skills and fields of knowledge which are not generally otherwise provided for in the regular curriculum; the club program should give those pupils who are specially talented or interested in various fields an opportunity to pursue those fields farther than is generally possible in the regular curriculum.

20. *Clubs on Demand.* Clubs in our school are organized on the basis of demand. When a group of youngsters expresses an interest in a special subject or activity, the opportunity is offered of forming a club. There

are the First-aid Club, Dramatic Club, Ceramic Club, Art-needlework Club, and Cooking Club. In the last, much practice is offered in giving parties, in table-decoration, and fancy cooking. Because of the limited experience of the youngsters (ours is a school for socially maladjusted youngsters) picnics are offered as a regular feature of the cooking club. The Leaders' Club centers around the use of gymnasium games to develop sportsmanship and leadership. The Visual-education Club is one which interests even those of lowest ability; their activities are largely viewing animal pictures, travel pictures, and films on similar subjects.

21. *Low I.Q. Course.* We felt that our school was not doing all that it should do for boys of low intelligence. These boys were leaving our school without any specific preparation to help them after they got out. We made a study of the kind of work being done by boys of that type who had previously left our school. We found that they had a very limited range of vocational opportunity. We consequently decided to begin immediately to train such boys along several lines which would increase not only their opportunities for work but their efficiency in such work as they might get.

One of our most personable men was given the job of handling the boys—a man of understanding and skill in handling people. Through a co-operative arrangement with a number of local business establishments, special training sessions were held on how to wash and wax automobiles efficiently, how to change tires, repair blowouts, and make minor automotive repairs. This work was done in the school shop, and was paid for by the automobile owners. The boys were taught to keep track of materials costs, time, and profits, how to make out a bill properly and how to present it.

Another phase of their work was simple carpentry. They learned to build fences and trellises. They learned how to make simple repairs of electrical apparatus. They learned how to do gardening and pruning. Most of this work was done away from the school under the supervision of the teacher.

22. *School "Radio."* We use our school public-address system for various radio-like experiences. Pupil-announcers broadcast notices, advertisements, news (the principal seldom uses the microphone at all). Dramati-

zations originated by groups of pupils, in connection with speech and dramatics, are put on the "air." Pupils broadcast descriptions of athletic events. Concerts by the musical organizations of the school are broadcast regularly, especially during the noon hour. Those who take part in our regularly scheduled public-relations program at the commercial radio studio downtown practice and polish up their program on the public-address system.

23. *Newspaper Work.* Our school newspaper work is a means of bringing pupils in contact with many people in and out of the community. The eighth-graders are responsible for all newspaper work—for publishing the school newspaper and for communicating school news to the newspapers downtown. They gather, compile, write, plan, stencil, and mimeograph the paper. They keep a cash book, handle all money, order all supplies, file subscription orders, solicit ads, and carry on all other acts incident to operating a paper. Complimentary copies are exchanged with other schools. Many residents without children in school subscribe regularly. Papers are regularly mailed to schools in England, France, Italy, and Scotland. Once a copy which had quite a bit about the President was sent to him and a reply was received. At another time a letter was received from the *Christian Science Monitor* asking if it might have permission to reprint one of our editorials.

The editorial committee sifts the news and decides which items would be of interest to the papers downtown. It holds news conferences with teachers and other pupils, then writes the news according to the form desired by the papers to which it is to send the articles. It has had interviews with representatives of these papers who have explained the form in which they like their material. Often pupils telephone news items direct to the newspaper office.

24. *Weather Station.* A weather station was established in our science classes as an outgrowth of a unit on weather. Groups of pupils rotate in obtaining information from our weather station situated on top of the school building. Barometer, thermometer, and instruments for measuring wind velocity and precipitation are among our equipment. Regular reports on our observations are made to the weather bureau. A pupil who is both experienced and highly interested in observing weather phenomena is in charge of each pupil group.

## JUNIOR AND SENIOR HIGH SCHOOL

25. *Course in Successful Living.* In one of our spring faculty meetings an interesting discussion developed about the problem of teaching pupils to do better some of the things which every person must do today in adult life. A committee was appointed to explore the possibilities of offering such a course and it secured suggestions from many faculty members as to what should be included. There was a large number of suggestions bearing upon important topics that were not being taught adequately in any other course. From these suggestions our course in successful living was developed. Although it has been a great success and has kindled a great deal of interest among the senior students for whom it has first been offered, it is under a continual process of revision. The course is administered by a committee of the faculty rather than by a single teacher. Ten different teachers participate in the actual teaching, each teaching different aspects at different times—depending upon special qualifications. The time may come when we may make this course part of the core—expanding and augmenting it with the most important material from other courses.

The units in the course are on consumer savings through insurance, installment buying and financial loans, hospital and health insurance, family accounting and budgeting, general household repairs and maintenance, a reading program for an intelligent person, major purposes of life—goals to be reached in living, analysis of happiness, evaluation of patent-medicine advertising, art in modern life, lessons in etiquette, personality development and personal appearance, good eating in successful living, heredity, child training and guidance, living successfully with the rest of the world, and consideration of some modern ethics. Visits to various community institutions are made at appropriate points throughout the course.

26. *Poetry-writing Class.* One of our teachers who is especially gifted in working with children and who has a high appreciation for poetry conducts a special class in verse-writing one period each day. All students who are free at the time and who wish may go to her room for this work. She helps them to understand the approach to verse-writing, explains meter, rhyme, etc. Students are encouraged to write on any

subject they choose. They are getting out a booklet of their own poetry written during the year.

27. *Foreign-language Arts.* Our regular foreign-language courses are strictly of the college-preparatory type. However we have organized a two-year sequence in foreign-language arts which offers the student an opportunity to acquire some knowledge of the languages and culture of four civilizations—French, Hispanic, German, and Roman. We spend about a semester on each under a teacher whose special field is the language in question. However the course is administered by a committee in order to keep it from becoming too highly specialized linguistically and to make it as broadening an experience as possible. Two types of students take the course—those who wish to have some acquaintance with foreign languages and cultures but who do not wish to specialize in a single language at this time, and those who wish to have some idea of the differences in languages to parallel their intensive study of one of the languages in other courses.

Study in each of the four languages and cultures is offered for a semester, thus requiring four semesters for the sequence. A student may elect any part or all of the sequence. About half of the time is spent on the people, customs, geography, history, art, literature, and music of the country in question. The other half is spent on the language. A small but useful everyday vocabulary is built up. Cognates and other relationships among the languages and with English are pointed out. Correct pronunciation is practiced.

28. *Exploratory Language Course.* We give an exploratory course in foreign languages in the eighth grade. The purpose is twofold: to discover those pupils who have language aptitude so that we can encourage them to continue the study of a foreign language; to give students a whole view of the development of language as a contribution to their cultural understanding. We spend the first six weeks or so studying the origin and early development of language, the origin and development of the alphabet, the Indo-European tongues, and the fascinating story of how prehistory is traced through word cognates, the languages of Greece and Rome, of France, Spain, and Italy, of Germany, the Lowlands, and England, and languages not related to ours. We look at a number of examples of material written in other languages (many of these are easy

to get hold of—the directions on a box of Two-in-one Shoe Polish, for example). We hear a number of other languages being spoken—mostly through recordings.

We then spend eight to ten weeks on French, Spanish, and Latin, taking them up together, as far as possible, and showing the large number of cognates and the similarities of the words. We spend a similar week or two on a comparison of German and English. We top the course off with a study of the large debt of the English vocabulary to many other languages.

29. *Unusual Arts.* We offer two unusual crafts which are open on an elective basis to all high-school students. One of these is a simplified form of one of the oldest of metalcrafts—the art of cloisonné. Vitreous enamel is fired over an open gas flame heated to a temperature of about 1400 degrees Fahrenheit by means of a blower. Our first blower was made from a discarded vacuum cleaner. We now have a commercial blower. We buy the enamel ground, and it comes in a wide variety of colors. Small copper bowls lend themselves well to enameling. The enamel is washed and dried. The copper is cleaned with nitric acid and sprayed with a solution of tragacanth gum. The enamel is applied from a salt shaker, and then heat is applied. When the enamel melts the crystals flow together.

Lapidary work is also offered. The cutting and polishing of semi-precious stones is taught as a part of our course in jewelry. Our purpose is not necessarily to train jewelers but to give students an interesting hobby and one that can become lucrative. Students in the course start with a very ordinary looking piece of rough rock, and from this beginning they see beauty growing under their fingertips. Economically they see the pennies which they have invested in the rough stone grow into dollars with the finished product. The equipment which we used was designed and made by the students and their teacher.

30. *Furniture Refinishing.* My special class of intermediate age does a great deal of furniture repairing and refinishing. The objective is not to produce cabinetmakers. There are no Sheratons, Chippendales, or Hepplewhites in this class. The objective is to teach the value of what was once thought a good buy. Any piece of furniture is worth attempting to repair or refinish before buying a new one.

We repair or refinish an average of two tables, six to twelve chairs, magazine racks, and a few smaller pieces during a school year. The furniture is brought to us by teachers, members of the school neighborhood, and members of the class. The chairs may need to be glued, to have new seats woven, or perhaps to undergo a complete refinishing of the wood.

There is no objective way of measuring this teaching, but if these children learn to respect property, learn to keep it in service by repairing broken pieces, I believe that something worthwhile has been taught them.

31. *Unwrapping a Course.* One of our teachers who gives an elective in economics makes a practice of getting out a little mimeographed bulletin of small newspaper size a few days before registration. It is called *Economic News* and publicizes the content of the course. It presents the kind of information that is taken up in the course and explains the kinds of topics which the pupil will study. This scheme of "unwrapping a course" so that pupils may see what is in it before electing it is a good example of course guidance.

The bulletin discusses some of the problems in the news—the federal budget, taxation, full production. It may contain a stimulating article on banking, raise questions about money, point up historical trends in foreign trade, or discuss economics and college plans.

32. *Extra Classes.* A number of senior-high-school girls who wanted home economics were unable to take it because of crowded schedules or because their curriculum did not include it. Consequently one of the home-economics teachers was reimbursed in terms of time so that she could arrange for two extra classes—one on Saturday morning and one after school on Tuesday—to help those girls who had specially requested an opportunity to take the subject.

33. *Chefs Club.* The Chefs Club is open to ninth-grade boys who are interested in learning how to cook as a hobby and in preparing various specialty dishes which men are often famous for among their acquaintances. The boys meet with the sponsor—the home-economics teacher—once during the regular club period and again at noon on another day for a total of 100 minutes per week of fun in the kitchen.

34. *Foreign-language Newspaper.* Our foreign-language classes all participate in the publication of a newspaper in the language they are studying. The French classes get out a French-language newspaper. The Spanish students get out a Spanish-language newspaper, and so on. This has been a most interesting project and a good method of securing well-motivated practices in composition. The papers come out several times a year. They contain material on current news events, events in the high school, jokes, cartoons, and some compositions and stories of a more literary nature. We regularly send copies to students of schools in foreign countries, and their replies—many of them published by us—add additional interest.

35. *Enriching Language Study.* We do a number of interesting things to enrich our studies of foreign languages. For example we have language clubs in each of the foreign languages studied. The proceedings of these clubs are all in the foreign language. Also the clubs get out foreign-language publications.

We make recordings for students of their own voices speaking foreign languages. These are made whenever the student feels he is proficient enough to try a recording. They are separate from recordings for improvement drill.

Also we make recordings of groups singing songs in the language and of recitation of poetry by advanced students. Songs of earlier classes are kept by the school and played for beginners.

Pupils of the French and Spanish classes who wish to do so may arrange their lunch periods to conform with those of the French or Spanish teachers. Table conversation at lunch is in French or Spanish.

36. *Shop for Girls.* Our home-mechanics course for eighth- and ninth-grade girls is intended to help the girls become more handy around the house and to give them some insight into methods of construction so that they may be better buyers of furniture and household appliances. We repair such things as ironing boards, electric irons, water faucets, and curling irons, learn washing-machine care, repaint kitchen furniture, solder pots and pans, and sharpen kitchen knives. Most of this material is brought in from the girls' own homes. We go into homes to find out where to turn off water, electricity, and gas; where to insert fuses; how to read meters.

37. *Weekly Calendar.* There are a number of events going on every afternoon after school. They are all planned and put on by different groups of students. The groups vie with each other in their attempts to make their programs interesting and vital so that a large attendance may be attracted from the student body as a whole. Each week a calendar is mimeographed and posted prominently throughout the school to draw attention to these various events. Time and place of every item in the week is listed with a clever advertisement indicating what is to happen. Here are a few selected at random from a week's calendar of events:

"Ever wish to visit gay Paris? Well, transport yourself to Room 222 today to enjoy discussing the sights of Paris."

"Want to learn to fly? The Lincoln Air Scouts meet to discuss plans for their encampment this summer. All are welcome."

"This afternoon the Current-events Club will discuss 'How Shall Democracy Deal with Groups that Wish to Destroy Democracy?' For an interesting discussion on a topic of vital interest to every American, come to Room 212."

"The Gardening Club has had lots of fun plowing and fertilizing plots for planting. If the weather is fine they will plant corn, tomatoes, beans, and radishes. They expect their first harvest in three weeks. Everything grown belongs to the students. How about joining them and enjoying the harvest?"

38. *Nonvocational Typing.* At least one year of typing is available to all pupils in our school. Pupils who have not had typing are urged to elect the course during their senior year. If necessary to meet the demand, an after-school class is organized. Typing has become one of the basic skills, along with speaking and writing, and every pupil (especially if going to college) is accommodated if possible.

39. *Civil Service Course.* Many failures in written civil service examinations result from a lack of knowledge of the nature and scope of the examinations used for such purposes. We offer a course to senior-high-school pupils on civil service work the purpose of which is to acquaint those students who may possibly be interested in taking civil service examinations with the variety of fields open to qualified candidates, and specifically with the nature of civil service examinations. We attempt to familiarize prospective candidates for such examinations with the many

different types of questions asked, the general nature of the examinations, the manner in which they are conducted, the methods of scoring, and the procedures for selecting candidates for positions on the basis of the scores.

40. *Related Math.* Our related mathematics course offered to tenth-grade-shop students is carefully tailored to the needs of such students. Following a general review of the fundamental operations of arithmetic—including square root, decimals, reduction of fractions, base rates, percentages, etc.—we study mensuration, drawing to scale, areas of triangles and circles, simple trigonometry, and slide rule. Field work includes use of transit, level, and measuring tape. Laboratory work in conjunction with the classwork includes the construction of cones, pyramids, and cylinders out of various materials according to carefully specified dimensions. Also we study various measuring instruments like vernier caliper, architect's scale, gear formulas, and gear models made of wood.

41. *General Speech.* A general-speech-fundamentals course is offered to all pupils in the junior high school. It is designed to introduce students to various phases of speechwork and to develop fundamental skills in speaking. The physiological structure of the speech apparatus is studied, but the main emphasis is placed on practice in public speaking, group discussion, oral interpretation, and dramatics. Students in this class who have exceptional speaking talent are identified and encouraged to join the dramatic groups and public-speaking clubs which function during the activities period. Other pupils are identified who need special remedial work with the speech teacher.

42. *Personality Course.* Two special classes in personality-training are held in our eleventh grade—one for girls and one for boys. Emphasis is placed on dress, manners, social practices, and becoming an interesting conversationalist. The course, which at first was offered only for girls, was somewhat ridiculed, but boys soon asked for a similar one for themselves, and additional sections have become necessary for the girls. Speakers are secured whenever possible. Recently a well-known authority on dress, who happened to be visiting in our community, spoke to the girls.

A wide range of material is used, especially in the phase of the course

dealing with getting a cultural background. Pupils are introduced to the reviews, magazines, and other periodicals and books which are especially helpful in this regard.

43. *Class in Photography.* Our class in photography is open to senior-high-school students and meets three times each week. The purpose is not to train commercial photographers but to give youngsters instruction in an activity which is very prevalent as a hobby among adults. Pupils learn to take pictures, including use of the light meter and composition, focus, and exposure principles. They learn dark-room techniques, developing, enlarging, finishing, and printing. Pupils learn to get better pictures and to save film through fewer spoiled pictures. Also they learn to appreciate good examples of photography. The teacher is an excellent photographer himself, doing considerable commercial work on the side.

44. *Using Home-economics Living Room.* Before Christmas we decorated the home-economics living room. It was very festive with all sorts of Christmas decorations, including a tree. All students in the school were invited to visit the room at any time during the week preceding vacation. The home-economics students (both boys and girls) were on duty to receive the guests, converse with them, and serve them cocoa and cookies (made by the students). It was an excellent experience in holding an "at home" social affair.

45. *Print Shop.* We have found our print shop to be one of our most useful shops. Its work ties in very nicely with the work of regular academic classes, as in the publication of booklets, surveys, and other material for language and social-studies classes. It is a very valuable adjunct to the extracurricular program—in the printing of school newspapers and magazines, leaflets and posters. And printing work is one of the most interesting of all types of shopwork for our students. We have one hand-operated press and one motor-driven press. We have complete cases of type in several faces and sizes. All of our typesetting work is necessarily hand done, since we do not own a typesetting machine. The committees which publish newspapers in the various schools of our system bring their copy to us. We advise them on layout and set all the large type by hand. Some of the small type is also set by hand—depend-

ing upon how many we have working in the shop at the time and how busy they are. The rest of the typesetting is done downtown at regular typesetting rates. Illustrations are wood or linoleum cut, or made from lead poured on specially prepared mats, or from commercial mats. Occasionally a photograph is photoengraved downtown. But all material is assembled and locked up for the presses by the pupils in our shop. We do many different kinds of school jobs, both in black and in color. For some of our school-magazine colorwork we have developed a silk-screen process printing both lettering and illustrations.

46. *Farmwork Program.* Ours is an urban community, and our school attempts to make the most of the educational opportunities of city life. Yet we are certain that rural farm life holds some educational values which cannot be secured by any other means than by working on a farm. Our high school has therefore organized a summer farmwork program. Only boys have been drawn into the program at the present time.

The program is under the personal supervision of one of the school principals who takes care of the many necessary arrangements. Farmers in rural areas are carefully selected. The farmer must be of high caliber to get a boy and must agree to act as a guide to the boy in his new farm experience. All farms are visited before the boys are placed. Help along this line has been secured from the United States Employment Service and from United States and state representatives of departments of agriculture.

Each boy who has had no previous farm experience spends ten days to two weeks at the state agricultural school before taking his summer job on the farm. Frequent visits by the supervisor from the schools, organized games for boys in neighboring areas, and talks with the boy and with the farmer characterize the main features of the program in operation. The boys become members of the farmer's family during their stay on the farm. They receive pay for their work in accordance with their experience, strength, and ability. The money they earn is their own, but they are urged to use good judgment in its use. They carry accident insurance for the summer (for which they pay themselves).

47. *Advertising Business.* Businesslike management of a school newspaper can produce real revenue for the school student council. A publication that is good enough to gain enthusiastic leadership from pupils and

their parents can serve as a real advertising medium for the small merchants of the community when there is no strictly local paper. For these merchants cannot afford to advertise in a daily of large circulation whose coverage is much greater than their community. However it pays them to appeal to the families of the immediate school neighborhood.

To sell advertising on a value-received basis requires very careful guidance. Not only must the paper be a good one but the advertising copy writers and advertising salesmen must be good. We have had the most success when the advertising and advertising business management of the school paper have been turned over to a group of the outstanding students in the business-education classes, with a business-education teacher with some advertising background as their faculty adviser. Close cooperation with the merchants as to their selling problems is necessary for a school advertising business which is to be a productive experience rather than a racket. Advertising salesmen need to talk with the merchants along such lines as: "Just what kind of a message do you want to get across to the students? Just what would you like to have them come into your store and buy? We don't want a 'compliments of . . .' ad and won't take them. Let us really advertise your store—some of the things about it that you're proud of."

48. *Stagecraft Class.* After working with a *stagecraft* class for five years I am convinced that the subject has a great deal to offer. First it gives the student a share in a school activity; it gives him an opportunity to learn by direct experience, and the amount learned may be measured by the student's own capacities. The fields explored range from art history, costume, and interior decoration, to aesthetics and literature. In this class all the students are taught some basic facts about the mechanics of the stage—how to build and handle flats, how to stretch canvas, how to handle paint, what tools to use for various purposes, and how to fly scenery.

Even though basic requirements are necessary to all the group, individual students differ so widely in abilities that everyone is able to find work in the class that matches his abilities. One student chose to do all the research in costume, architecture, and interior decoration for the stage set and props for *The Taming of the Shrew*. He supplied the necessary information to the designers of the set, who put it to use. This meant

not only reading plays but acquiring information from art and costume books and from historical novels.

Another student, an excellent draftsman, made a blueprint of our stage and then prepared mimeographed copies which could be used by members of the class for making preliminary plans for stage sets. A model stage sits in the corner of the art room, and the miniature props are made to scale for it. After the first sketch on the mimeographed stage plan, the plan is transferred to the miniature stage. From there, working carefully to scale, all sets and props are designed and built for the full-sized stage. Parts of the work are divided among the members for execution. But when the various parts are completed they all fit together because of the careful planning.

Both an art and a drama instructor collaborate in teaching this class, which is offered on an elective basis.

*49. Industrial-arts Lab.* Our industrial-arts program is organized with the primary purpose of giving students as wide a variety of experiences as possible in fields of activity related to technological processes. Besides general woodworking and pattern-making, consisting of both hand- and machine-work, we do a great deal of metal-work. In art metal-work we do projects of copper, aluminum, brass, and nickel-silver. In bench metal-work we use mild steel as the principal material. Both in wood- and metal-work we make the general run of products which may be found in our department stores: tables, flowerpot holders, lamps, doorstops, stands, book ends, etc. Our purpose here is to give students some insight into the amount of work which goes into typical useful objects, and we discuss with students the methods of producing these objects in industry when those methods are different from our own. Green sand molding is used for making castings from Zamak and aluminum. Zamak is a very good material for casting, since it takes a very fine finish in plating and polishing. Green sand molding is also used in correlation with pattern-making and machine-shop practice. The student constructs a wood pattern and makes the casting, using machines for finishing the project. We do electroplating in copper, nickel, and chrome.

In machine-shop practice we have a back-gear engine-lathe, a milling machine, and a shaper. The students make various projects for home and school use, including small tools. One major project last year was a copy stand for our 35mm camera. We use this camera in our shopwork.

We make photographs for use in shop theory. This year a major project is a photographic enlarger. This requires about eight patterns and castings of different types and other machine parts.

50. *Formal Tea.* Annually the junior and senior girls' honor society presents a formal tea for the faculty. This tea, which takes place in the school library on an afternoon in February or March, gives the girls a splendid opportunity for planning and carrying out a social function of considerable intricacy. Preparations are made entirely by the members of the club. The girls decide on the refreshments which will be served, do all the buying of food, make the tea sandwiches, and arrange the tea service and the room in which the tea is to be held. There are numerous plans which must be made, from deciding upon who is to pour to who is to greet and entertain the guests.

#### SENIOR HIGH SCHOOL

51. *Special Journalism Course.* Students of our senior high school who are interested in journalism may get elementary training in news-writing and journalistic practice without having to schedule an extra course. This is made possible by a modification of our regular English offering. In the junior year a special version of the regular English course is offered. It covers the usual topics in everything except composition, where journalistic writing is substituted for all other types of writing. Students of this class have their material considered for publication in the school paper, along with students of the more specialized journalism courses.

52. *College Conference Day.* Our student body is canvassed early in November of each year to determine who is planning to go to college and the choice of college, business or other school which has been made. Each college which is named by three or more students is invited to send a representative to our school to participate in our annual College Conference Day. Before the day, students are prepared. Teachers distribute catalogues among them. A pamphlet of information is mimeographed and distributed to all who plan to attend the conference.

This day is held in the late winter or early spring. A luncheon is served in the high-school cafeteria. Afterward the representatives of the vari-

ous colleges go to rooms which have been assigned to them for conference purposes. Classes are dismissed early and all students and their parents have the opportunity of visiting as many of the college representatives as they wish. Students of three neighboring high schools are invited to participate in the program. A teacher is assigned to each of the college representatives to give him whatever assistance he may need.

The results are a better informed student body and a good relationship between our school and the institution taking our graduates.

53. *Law Club.* Our Law Club is open to all students who are interested in knowing more about the law, legal practice, and the various public-service occupations related to the law. We study trial practice and procedure and legal office practice. We prepare and draw up deeds, mortgages, assignments of mortgage, liens, wills, summonses, complaints, answers, and bills of particulars. From time to time we have invited lawyers to come in and discuss various points with us. We do not invite these people unless we have some set of specific questions or problems to consult them on. We also visit courts in session and the offices of lawyers in the town.

54. *Occupational Information Course.* We offer a basic occupation information course to senior-high-school pupils. Students make an average of fifteen to twenty visits per term to industrial plants and offices in our vicinity. Speakers from various occupational fields come in to talk to the class: lawyers, doctors, salesmen, newspaper correspondents, auto-maintenance specialists, engineers, personnel directors, and so on. About thirty motion pictures on various industries are shown in the course of a term. Students select a specific occupation to analyze in detail. The notebooks which they prepare on their selected occupations contain notes on visits, speakers, and motion pictures which are pertinent, as well as information culled from books and pamphlets, newspapers and magazine articles.

55. *Laboratory Techniques Course.* Our science department has organized a short course called Laboratory Techniques. It is designed to give students a skill and interest in the techniques used in laboratories—especially hospital laboratories. Students learn to use fundamental labora-

tory equipment—the microscope, pipette, Bunsen burner. They also get an appreciation of the need for accuracy in their work. They study the theory and practice of making solutions, simple physical and chemical urine analysis, and simple hematology. It is not necessarily the purpose of the course to train laboratory technicians, but rather to give students a little closer understanding of the work done in occupational fields related to the biological sciences. Those interested in medicine or nursing as well as in laboratory work get deeper insights through some firsthand experience; and those with special talent for these fields are also identified.

56. *Philosophy Course.* We offer a course in philosophy, an elective, and only for seniors. It has proved to be a very stimulating experience for students. Simple terms such as *truth*, *fact*, *know*, *right*, *wrong* are examined and reexamined. By means of questions designed to lead the student to examine his own thoughts and beliefs, the student comes to develop his own definitions for these terms. Eventually he compares his definition and use of a term with those of his classmates and with those of writers in the field of philosophy.

In the same course emphasis is placed upon simple, logical reasoning. There is a demand for consistency. Any opinion or idea is accepted with respect, provided that the student does not contradict himself, that he is consistent in his use of terms.

57. *Merchandise Fair.* An excellent opportunity for special training is offered students through our high-school merchandise fair. On about the first of March each year thirty of our local merchants (a different thirty each year), mostly in the household-equipment line, are invited to choose space in our gymnasium for displays at the fair. After spaces have been allotted, all of our retailing students are allowed to compete for the sixty positions to represent these thirty merchants (two for each merchant). The merchants interview the candidates who are competing for appointments as their representatives and make their selections. After they have made their choices they later give these students a thorough training in selling the merchandise that the merchants expect to promote at our fair. The training is in many cases done by national concerns, at representative sales schools, with salesmen, or at the immediate store

being represented. At any rate, when the fair is open to the public free of charge, usually the first week in May, only our students are permitted to be present in the booths. The students take any orders which they may secure. The fair averages well over 6,000 in attendance (about one-sixth of our total population) during the three evenings on which it is held. Very little need be said about our placement opportunities, since the Merchandise Fair has brought us into contact with over 200 firms in our community in the past several years.

58. *Distributive Education.* The school part of our program in distributive education occupies a double period daily. The first period is devoted to discussions of theory and text material, reading and reference work. The second period is devoted to laboratory work and work of a similar nature. During the first three weeks the second period is spent in the laboratories of the science department where the pupils learn about dyes, stain-removers, textile-testing, and cosmetic-testing. The next three weeks are spent in the homemaking department learning about weaves and textile-formation. Three weeks are spent in the fashion department learning about design, color matching, line, and style. Then follow three weeks in the art department experimenting with color, hue, shade, harmony, rhythm, and design. Three weeks of diversified lectures on display by authorities from stores in the community are followed by three weeks of lectures on aspects of retailing by other persons from the community's shops and stores. Five field trips are taken, and the whole is topped off with a series of lectures on related subjects: English, public speaking, business arithmetic, stenography, and higher mathematics.

This program takes place in the morning. Pupils also have room on their schedule for one or two other courses which they may elect. In the afternoons pupils spend a minimum of 300 hours per year working in the stores of the community.

59. *Student-radio-operator.* One of the problems of opening and operating our senior-high-school FM radio station (which went on the air last June) was the training of student-operators to meet the requirements of the Federal Communications Commission. We foresaw this problem, and while the transmitter was being installed we inaugurated a new course—a one-semester class in radio-operating which meets one period

a week for one unit of credit. One student of this group has passed the FCC test for a first-class operator's license and a number of others have second-class licenses.

60. *Special Chemistry Projects.* Chemistry students who are doing superior work and exceptional students who are working in related subjects in other departments are free to participate in various chemistry projects in the chemistry laboratory. The time is after school, from 3:00 to 5:00 P.M., and on certain evenings from 7:00 to 9:00 P.M., and during an instructor's free period. These students do soil-testing, experiments on dyes, textiles, and cosmetics, preparation of laboratory solutions, or work on foods and nutrition problems. Next term's junior laboratory assistants will be chosen from among the outstanding chemistry students of the present junior class. Since they aid beginning pupils with their laboratory work they must be fairly self-sufficient in the laboratory themselves. They therefore need a great deal of experience. For that reason most junior lab assistants are chosen from among those who engage in these special projects.

61. *Department-store Fashion Board.* One of the large department stores serving our area gives a very interesting and worthwhile experience to a selected number of girls each year. This is the Junior Deb Fashion Board. (Other department stores sponsor variants of this practice. It would probably not be difficult to persuade other stores to do it since it is good public relations for the stores.)

Six or eight girls are chosen by the art and home-economics departments each spring at the request of the store. The selection is based on scholarship, personality, and ability in clothing-construction and design. The girls receive personal interviews from the personnel director of the department store, and those who qualify for membership on the Junior Deb Fashion Board spend each Saturday at the store, working on assignments planned and carried out under the guidance of the various store department heads. Each girl receives a variety of experiences from selling and modeling to organizing fashion shows for schoolgirls of her own age.

The experiences of making personal interviews, learning how the clothing business is tied closely to many other fields, seeing and learning

to know clothing values, dealing with people in business and with customers—all these make the richest possible source of worthwhile learning. As a reward, the member of the board who scores the highest number of points (based on interest, ability, and effort in the various tasks undertaken) receives a complete wardrobe. The store pays all of the girls \$4 each per Saturday to defray expenses.



## Practice 12: VARIETY OF MATERIALS

*Using a Variety of Materials of Many Different Sorts to Supply Needs for Abundant Sources of Information.*

*Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b.* Uncover and develop many different kinds of special talents in individual pupils.
- c.* Guide pupils in learning to think.
- e.* Develop good citizenship.

A TEACHER needs tools to work with. In many instances where teachers are willing and ready to do a better and more up-to-date job of teaching, the bottleneck is the lack of materials that are appropriate for the job—adequate both in quality and in quantity. For, more and more, good modern teaching requires a greater variety of sources of information for pupil use—books, pamphlets, periodicals, pictures, maps, globes, charts, films, slides, filmstrips, models, recordings, samples and many other kinds of materials for securing information and developing insights. The most beautifully designed curriculum will hardly function satisfactorily if teachers do not have the materials to do the kinds of things it calls for.

*A wide variety of printed materials is needed—materials of many different sorts, on many different levels of difficulty.* How can a teacher teach pupils to think—to secure evidence, weigh the evidence, and draw conclusions—by the use of a single textbook? In a single text the evidence is all there, it is all weighed, and the conclusions are all drawn. Many books, many kinds of references, encyclopedias, pamphlets, and

periodicals are necessary if a teacher is going to teach pupils how to search for evidence on the printed page.

There need to be, in any one classroom, many different sorts of printed materials if pupils are to learn to read adequately for today's needs. How many kinds of reading do we want pupils to learn to do well? There are recreational reading, skimming, reading for the main idea, reading for details. For practice in recreational reading alone a large number of books is needed: books on as many different subjects as pupils have interests for. And they should be quickly available—in room libraries.

There need to be, in any one classroom, printed materials on many different levels of difficulty. Any teacher can testify that one great weakness of the single textbook is that some can read it, some cannot, and for others it is too simple. Any normal class of youngsters—in elementary school and high school—contains a wide range of reading abilities. And the more advanced the age, the greater the range. So if the collection of materials from which a class of pupils is to gain information is to match the pupils' abilities to read, there must be an abundance of material to read on many different levels of difficulty.

*A wide variety of audio-visual, manipulative, and other concrete aids of many different sorts is needed to help quicken the development of insight.* Words are not enough. No one can master a subject unless he can see into it. *Insight* the psychologists call it. A person must be very adept at using words and must already have a clear conception of the action to which the words are referring, if he is to learn from words alone. Aids are needed which will help a student to "catch on." These are the *concrete aids*; they present facts, ideas, and concepts in concrete form to supplement the abstract, verbal form in which they are presented on the printed page. They tend to make knowledge firsthand; they tend to make thinking realistic. Samples cited below include those which are brought into the classroom. Practices of going out into the community (see Practice 13, *Community Resources*) are even better for the purpose in many respects. The net result of the use of concrete aids and community resources is to build experience in pupils—experience under guidance.

Pupils do not learn to think without experience; they do not develop the insights of good citizenship without experience. Through experience their capacities are enhanced, their command of knowledge and skill is made meaningful. Experience is something that is close to you, something of which you are a part. Reading is of course a kind of experience, but

it is always at least one step removed from the actual thing itself. Still, in our civilization, reading is one of the most important skills—so pupils must be given the best possible chance for learning it, through an abundance of reading materials. But the two—reading materials and concrete aids—must be tied together in a single program of building pupil insight.

*The use of a Variety of Materials should not be viewed as prohibitively expensive.* For printed materials the small sum of two or three dollars per year per pupil over a period of years will grow into a handsome collection. Many of the best pamphlet materials are free or relatively inexpensive. Combing the community for periodicals costs nothing at all. For many concrete aids the expense is greater. But there are also many of these that are relatively cheap. Many valuable teaching charts can be made by pupils. A collection of a highly useful assortment of teaching pictures takes only the time and attention of a resourceful teacher.

### SAMPLE PRACTICES

The sample practices in this section are classified under the following headings:

1. All Age Levels
2. Lower and Middle Grades
3. Middle Grades and Junior High School
4. Middle Grades and Junior High School and Senior High School
5. Junior and Senior High School

### ALL AGE LEVELS

1. *Periodical Material.* Our board of education subscribes for several copies each of a number of magazines which are made available on the library reading table and are also available for long-time loan to individual classrooms. These magazines include *National Geographic Magazine*, *Popular Science Monthly*, *Home Craftsman*, *Sky*, *Model Builder*, *Current Aviation*, *Story Parade*, *Field and Stream*, *Life*, and *Look*.

Our Parent-Teacher Association subscribes for daily and weekly newspapers which are delivered directly to the classroom. Parent-Teacher Association contributions, added to a fund to which the children contribute, enable us to subscribe to a number of periodicals produced espe-

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. Individuals differ in all sorts of ways. They differ in ability to read, in ability to learn from different kinds of material, in the interests which move them to learn. For this reason no school can be thought of as efficient if the materials it uses are exactly the same for everyone.

2. You start to grow from where you are and not from some artificial starting point. Growth is continuous, not jerky. No pupil can be successfully forced to a step which he has not grown to. Therefore the materials of any class must vary in difficulty.

3. It is impossible to learn one thing at a time. It is impossible to turn everything else off while learning two times two. The learner as a whole responds to his setting as a whole and takes in many things at once. This means that learning by problems, topics, and projects should replace learning by bits. But the former requires a variety of materials, while the latter can get along on few materials, inefficient though the method is.

4. Learning is reinforced when two or more senses are used at the same time. Pupils learn better if they see with the eye, touch with the hands, hear with the ears, at the same time that they are seeing with the mind's eye. This means many kinds of concrete aids if the school is to be efficient.

5. What a person learns is influenced directly by his surroundings. (See Reason 2, Practice 1.)

### SOCIETY SAYS:

6. Schools should keep abreast of our rapidly increasing knowledge of the world. So fast are changes taking place—in science, in geography, even in our knowledge of history—that no school is making the best return on society's investment if it uses materials which are out of date.

7. Schools should keep abreast of technical improvements in communication. Motion pictures, sound-recording, radio, television, training aids—these are some of the media of communication which far outstrip the printed page in teaching potentiality. No school can be thought of as thoroughly modern which does not take rapid steps to adopt such aids when they appear.

8. Free access to the facts and free discussion are basic to democratic society. Free access to the facts means many materials, not one textbook.

9. Make the investment in time and money count. A large investment is not sound if just a little more can make it much more productive.

## SAMPLE PRACTICES (Continued)

cially for pupils—*Current Events*, *My Weekly Reader*, *Scholastic*, *Young America*. All of these arrive in classrooms which want them, with an adequate number of copies. From time to time various benefactors donate subscriptions because we constantly encourage such contributions.

The cost of this periodical-subscription program is only a small percentage of our total budget; calculated on the basis of per-pupil cost, it represents only a small investment.

2. *Post Cards.* Each child contributes to our post-card file. Each parent is asked to help too. We began assembling the post-card file some time ago and it now contains a large number of scenes from many parts of the world. It is very useful in social studies and children also get a great deal of fun from looking through the cards in spare moments. The cards are catalogued and filed by subject in little card-file boxes. When children return from trips they usually have additions to make to the post-card collection, and I have noticed that they have become much more discriminating in their choices of cards to report their trips.

3. *Picture Shower.* To get pictures to start a large cooperative picture file in our school we held a "picture shower." All the teachers brought in magazines and pictures collected from their own homes and from friends' and neighbors' and pupils' homes. At the meeting pictures which seemed useful were cut out and mounted, catalogued and classified according to school subject and unit title. This was the beginning of our picture library which now numbers over 20,000 pictures touching upon practically every subject and unit taught.

4. *Globe.* We have many uses for a large globe that our school secured from War Assets—where it was used as a training aid. Land surfaces are outlined on the globe, but the surface may be drawn upon in chalk. A magnet in the center causes little wire figures, which we have made and dressed like people of different countries, to cling feet first to the globe as it rotates—just like gravity.

5. *Odd Moments.* I like to have a number of interesting activities of short duration that I can use at odd moments—when we are waiting for

the lunch bell, when a majority of the class is drawn out of the room for band practice or religious education or for some other reason, or when we have finished the regular work of the period before the bell rings. The time during which children are in school is all too short anyway, and I don't believe in wasting it.

One of the most successful of my "odd-moments" activities revolves around a collection of old magazines stored for the purpose. "Let's pass the magazines," I say, and four students whose responsibility this is quickly oblige. There are a number of things we can do with the magazines: I may say, "Let's look at the ads and see what kind of tricks the advertisers use. Let's find examples of advertisements in which the ad-writer is appealing to your desire to be a 'big shot'" (Or some other appeal.) The pupils industriously turn the pages and get great satisfaction out of spotting such advertisements. The pupil who finds one reads and describes or shows it, and we discuss it briefly. And so on to the next.

Or I may say, "Let's look for pictures that were taken out of town and see if we can guess where they were taken." Pupils quickly find examples which they show to the class, and they tell where they think they were taken and why they think so. There may be disagreements which lead to lively discussions of points of view, with reasons given. There is often some careful observation and some keen thinking exhibited in an exercise of this kind.

6. *Local Book.* Members of the teaching staff were engaged by the board of education of our school system to write a book about our city and region which could be used in the schools to help the pupils understand better the part of the country in which they live. The teachers were released from their regular duties in order to prepare this book. They were assisted by capable people in the community—city engineers, local artists, business and professional people, and others who know about special aspects of the city and region. This is the kind of text which is not available on the market—a text on the local community. There is no way to get it other than to write it. It is not necessary that it be printed in order to be useful.

7. *Visual-aids Catalogue.* A catalogue listing all the visual aids available in our visual-aids center is issued to all teachers. It lists them by subject, by courses of study, and by unit titles. Materials include sound

films, filmstrips, slides, realia, models, mounted pictures, and mounted clippings (pictures and articles) from magazines and newspapers. Materials are sent out on written requisition the day after the order is received.

8. *Teaching Aids.* The service room is one of the most important rooms in our school. In size it is the same as a regular classroom. Reference and textbooks, pamphlets, magazines, newspapers, booklets, charts, models, portable exhibits, globes, maps, catalogues of supplies, etc. are appropriately housed on shelves or in racks. Teachers deposit their clippings and pictures in a large cooperative file that may be used by all. Mimeograph machine, ditto machine, sound- and slide-film projectors, typewriters, records, phonographs, films, and slides are stored here, each article in its proper place. Teachers or pupils may secure materials or equipment by signing for an article when it is taken. An article which is in considerable demand must be signed for in advance on a schedule form which is posted near its location. The room is never locked and we have never found it necessary for anyone to stay in it to police it.

9. *Great Paintings.* Our collection of reproductions of paintings consists of 270 good prints in color. Included are examples of paintings from the time of Giotto to today. These are used by the art teacher, of course, both in art-appreciation courses and in art-production classes. Also they are available to other teachers who consult the art teacher for examples meeting certain specifications: historical, biographical, geographical, social, *et al.* The pictures are kept circulating by exhibition in corridors and classrooms; inserted in the button type of frames, they are changed frequently.

#### LOWER AND MIDDLE GRADES

10. *Homemade Primers.* I have provided new reading materials for my primary children by taking pictures from reading-readiness workbooks. These pictures, of course, have great narrative possibilities. I paste them into individual booklets with appropriate stories which I prepare. These stories provide added repetition of the basic vocabulary in new and different situations. Because these new story booklets are short and the vocabulary limited, children who are beginning to read find them very enjoyable.

11. *Numbers through Action.* One reason why some children are relatively slow with numbers—slower at least than they are with words—is that they do not visualize their relationships. Words are part of our common system of communication from the age of a few months until the end of life. But it is seldom that number relationships form an important part of our communication of our wants and interests. Still, in school, many ways can be devised to help children visualize number relationships. For example in Grade 2 I have children act out various number combinations. Children form groups of various sizes. Then I write on the board a number combination—like 3 plus 4. The “3” group of children joins the “4” group; we count and see that it is 7. Or 4 minus 3—the children of the “3” group go up to the “4” group and each child takes away one of the latter. We see that there is only 1 left.

In learning to tell time the children make their own clockfaces, with hands which can be moved. Most children like to play with them and often the faster children are able to teach the slower ones to tell time.

12. *Using Abandoned Books.* Most schools have old abandoned books. I collect them and have pupils cut and mount all the good stories and material in attractive art-paper covers. We classify them as to poetry, history, animal life, fairy tales, etc., and place them in the library or on shelves in the classroom. They are read over and over. Many fairy tales and history stories are told over and over and not twice quite alike. I let the children read them all and then discuss their likenesses and differences.

13. *Room Library Table.* In the rear of our room we have a reading table with a half-dozen stools around it, and when the children have any spare time they thoroughly enjoy going back to the table to look at and read the magazines and books found there. We have many different kinds of magazines and at different reading levels—the *Instructor*, *My Weekly Reader*, *Red Cross Courier*, *Children's Activities for Home and School*, *National Geographic Magazine*, and others. I find these create a greater interest in the pupils' reading and help them to become better readers.

14. *Cans, Bottles, Bags, and Weights.* In studying the table of weights, pupils of the fifth grade were asked to bring in labels from cans, bottles,

bags, etc., from which we examined the types of things which are measured by ounce, pound, and pint. Original problems were then made up by the children using fractional parts of a pound.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

15. *Mapping Westward Expansion.* Raised map-making is a device that helps pupils see the point in history. In studying the progress of the frontier from east to west the pupils are enabled to see how our country grew from the thirteen colonies to a nation of forty-eight states. The map is made from salt and flour moulded on a board. As new territory is gained the pupil paints that portion of his map in color. The completed map is covered with shellac for preservation. These maps help the pupils recall the size of and the order in which the territories were added.

16. *Homemade Relief Map.* It has always been hard for children to grasp the meaning of plains, plateaus, and mountains from a flat map. This year we worked on a project which has proved to be one of the most interesting activities of our school year. We made a relief map showing the natural regions of the United States. Children brought old newspapers which they tore into very small pieces. These they soaked in water and then added flour and glue, kneading the mixture until it was the consistency of clay. A piece of Celotex five feet by eight feet was used as a ground. Upon this the children drew a large outline map of the United States. This was done very carefully with frequent measurements so as to preserve the scale. Then the papier-mâché was applied to form the plateaus and mountains. We adopted a vertical scale to show relative heights. The use of a scale involved the children in calculations and searching for information in their books. After allowing the map to dry thoroughly they painted it in different colors for the different types of land formations.

17. *Lantern Slides.* Pupils of a sixth-grade class, at the close of their study of American history, prepare a set of handmade lantern slides on highlights of American history. They find a picture suitable for copying or making a free hand sketch. Each pupil prepares a one-minute talk to accompany his slide. A program is worked up and presented to the fifth

grade, to stimulate them toward their next year's work. Sometimes the slides and talks are loaned to other schools. This activity, besides giving experience in art and oral and written English, helps the pupils to evaluate the important phases of history.

18. *Seeing Decimals.* Into my sixth-grade arithmetic class I have brought such tools as micrometers and vernier scales to assist in the study of decimals. These tools are passed out among the pupils and they are asked to find 0.2 of an inch, find the length of their pencils to the nearest hundredth of an inch, and so on. By this means the children are able to see the actual fractional measurements; the practice is of great assistance in helping them to understand fractions.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

19. *Magazines from the Community.* In every community there is a wealth of printed material which is available for pupils at the cost of only a small amount of time and effort. Through inquiry I was able to secure the names of persons in my community who receive each issue of such publications as: *Life*, *Time*, *Saturday Evening Post*, *Pathfinder*, *Reader's Digest*, *Fortune*, *Collier's*, and *Coronet*. By contacting these people I found that they were eager to give each regular issue to our room if some one would call at their homes to collect the magazines. These magazines are placed on a magazine rack provided for them in the rear of the room and are available to all students. Older copies are placed on a special shelf and any article, cartoon, or picture may be removed from them for the purpose of making reports, surveys, or scrapbooks.

20. *Current-issues Bulletin Board.* Important articles from newspapers and magazines are used in the following way in our social studies classroom: We have a long bulletin board with the heading "Current Issues." When a pupil or group of pupils locates articles on a topic which seems important, the pupil or group applies for space to post the material on the bulletin board. Since the bulletin is always full it is necessary to take down something to make room. Usually the oldest display, or one which has created only limited interest, is taken down. It is saved, however, and goes into a large scrapbook which is called "Current History."

The new display is pinned to the bulletin board, the articles attractively and interestingly arranged. A lettered heading is placed at the top, printed by the pupil or group arranging the display. Other lettered captions commenting on the material, calling attention to opposing points of view, or indicating further references to the subject are pinned in appropriate positions around the display. This treatment of current issues usually draws a great deal of reader interest and generates classroom discussion.

21. *Our Bibliography.* During the course of any unit we have a large sheet of paper posted on the bulletin board entitled "Our Bibliography." We generally work in committees, with each committee taking a responsibility for a phase of the general topic of study. If a pupil comes across a piece of material—book, pamphlet, article—which he feels is a good source of useful information he writes the reference on the chart, listing it by author, title, and page number.

22. *Our Card-index File.* Intermediate pupils in the social studies make their own card-index file of source materials. They use three-by-five cards on which they list main references, supplementary books, and library books that contain articles relating to topics studied in the social studies. They also list periodicals, pamphlets, or any other sources of material they can find. A committee of pupils, elected for a semester, keeps the file alive. This activity helps the pupils to locate and use all sources of information available in the school.

23. *Opera Display.* To tie in with the experience of seeing the motion picture *Carnegie Hall* at a commercial theatre, a special display was set up for pupils' examination. The display contained a score of the opera *Faust*, a smaller reader's score of Tschaikowsky's *Symphonie Pathétique*, a libretto program, and *Opera News* with material on *La Traviata*, pictures of opera stars, and numerous other numbers of *Opera News* showing costuming and scenes of various operas.

24. *Projection Group.* Twenty-five or thirty children in our school have been trained to operate all our audio-visual equipment. To keep the group up to strength new operators are selected from time to time, as needed, from the class of trainees. These pupils not only handle all the

showings in our school but are available to churches, clubs, and other outside agencies.

#### JUNIOR AND SENIOR HIGH SCHOOL

25. *Foreign-language Resources.* The work of a foreign-language class can be greatly enriched at only a little expense per pupil by subscribing to foreign publications. The interest which these publications create makes the investment well worth while. For example for my Spanish class I ordered subscriptions from Latin American countries. All types were included: sports, current events, fashion, movie, comic, women's and children's magazines, Spanish editions of *Reader's Digest* and *Time*.

26. *Department Library.* The home-economics department has an abundance of recently published books of the best authors in all grade levels from seventh to twelfth grades. Only in senior high school is a text used and it is supplemented by many reference books. We have our own library in the department. A variety of magazines is on the magazine rack and reference material is filed for use of the students. Illustrative material is used to a great extent. Manufacturing companies are very glad to send materials for class use. The use of electrical appliances is stressed.

27. *Home-economics Library.* We have managed to build up a very extensive library in our home-economics rooms. A great deal of it was acquired very cheaply—pamphlets secured from the Superintendent of Documents, Washington, D.C., bulletins issued by various food-testing laboratories, bulletins from university departments of home economics, and so on.

We have assembled books ranging from easy reading levels to adult levels on child development, family management, nutrition, personality, and budgeting, besides many books which might be found in a social-studies library on various phases of human relations and the history of the family and other institutions. We have built these up over a period of years on a modest yearly budget.

Magazines like *Harper's Bazaar*, *Vogue*, *Good Housekeeping*, *McCall's*, *Better Homes and Gardens*, *Woman's Home Companion*, and *Ladies' Home Journal* are also a part of the reference materials. Current issues

and bound back issues are available. Copies of some of these are secured regularly from patrons and parents the month after they come out.

28. *Individual Filing Systems.* In my eighth-grade social studies each pupil has his own filing system. He clips from newspapers and magazines articles and pictures of interest and files them according to topic. He underlines what he considers the salient points in each piece of printed material. When I evaluate the work of each pupil I judge it according to (a) the dependability of the source of the material, (b) the breadth of information represented, (c) the care and discrimination exercised in underlining portions of the material. This practice encourages students to read and browse widely and gives them an opportunity to organize and judge independently the material appearing in the press.

29. *Gear Model.* Using a gear model helps pupils see the point in vocational math and vocational science. I use a simple gear setup (as well as a compound gear setup) that actually turns to show the relation that exists between revolutions of the driver and driven gears. This model is mounted on a drawing board with many holes so that the shafts or axles can be placed in different positions when supporting different gears. This model can also be used to find the required number of teeth on driver and driven gears when the r.p.m. of these gears is specified.

30. *Dramatic Recordings.* Having read *Macbeth* with a senior group I then had them listen to the records done by Judith Anderson and Maurice Evans. Some students came in for a second hearing at a time not assigned for English class. With one group I tried using the records before reading the play. This didn't work. They must have the background facts to appreciate the drama.

31. *Recordings.* We use a great deal of recorded material in our studies of literature. Some of Shakespeare's plays have been recorded complete. Readings of their own poetry by Frost, Lindsay, Sandburg, Eliot, and others are available. Even a number of novels are available in "talking book" editions for the blind. Excerpts from these are useful in providing the student with another dimension of meaning, as it were, when prose works are interpreted by expert readers. Any comprehensive book on recordings, as well as current reviews of recordings in various periodicals,

will list many such recorded materials which can be used by the teacher of literature. These are not always presented to full classes of students, unless it is the purpose of the teacher to discuss the rendition in order to enhance the meaning of the piece for the whole class. Much independent listening is done by individuals in connection with material being read or excerpts from dramas being planned for presentation to the class.

32. *Contemporary Literature.* Current periodicals are used in our senior class in English and American literature. These include not only the popular and illustrated weeklies and monthlies but magazines of literary importance—*Atlantic Monthly*, *Harper's*, and some of the so-called "little" magazines. Criticisms and literary productions published in these magazines make a study of literature much more lively than the typical textbook approach. Critics get into arguments, fresh viewpoints are expressed, the current social scene is reflected in both criticisms and stories.

Little is to be gained by a detailed study of bygone writers unless students are able to judge current productions of writers. This method makes a frontal attack upon the latter objective. And writers are often compared in critical articles—modern writers with older writers. A discussion of these articles may send students back into the classics with a new interest for reading.

33. *Newspapers.* In doing a unit on journalism my students used newspapers from major cities in the United States, some from Canada, and several small-town papers for purposes of comparison. Single copies can be secured cheaply by writing direct to the newspaper offices. Practically every type of writing as presented in the various papers was discussed.

34. *Science Shelf.* Students in physics and chemistry classes subscribe to *Current Science*, *Aviation*, *Science Digest*, *Popular Science Monthly*, and *Chemistry*, according to their tastes. *Science News Letter*, *Chemical and Engineering News*, *Science Illustrated*, *The Science Teacher*, and newspaper articles are available in the classroom. There is also available a large number of up-to-date texts of college level, in both physics and chemistry, for use in the classroom when a question arises or a dispute occurs. Good biographies and novels dealing with science or scientists

are found on a special shelf in the library. Much material in the form of pamphlets, radio-broadcast scripts, and well-illustrated catalogues from supply houses are also on file.

35. *Atoms and Playing Cards.* In academic chemistry a very simple procedure is employed in studying the periodic arrangement of the elements. This study consists of comparing the early attempts to classify the elements with today's classification based upon atomic structure. The students' attention is directed to Mendelcjeff's classification of the sixty known elements and the fact that Mendelejeff in 1869 could by a simple scientific procedure predict the properties of undiscovered elements that later were discovered and found to possess the properties as predicted. To illustrate that this procedure was simple, scientific, and not just good guesswork, a deck of fifty-two playing cards is used. From the shuffled deck three or four cards are removed and the rest are laid in suit rows (corresponding to the groups in which the elements are ranged) in decreasing face value (corresponding to the orbit arrangement of the elements). In this way it is easy to decide what cards have been removed and each missing card can be given definite characteristics. Thus a student can understand the procedure and advantages of arranging the elements periodically.



## Practice 13: COMMUNITY RESOURCES

*Using the Knowledge, Talents, Skills, and Background of People and Agencies in the Community to Enrich the Work of Pupils in the School*

*Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills.
- b.* Uncover and develop many different kinds of special talents in individual pupils.
- c.* Guide pupils in learning to think.
- e.* Develop good citizenship.

ONLY recently have schools started to become community centered. This is odd, for schools have always held as a major objective that they were preparing pupils to take their place in adult society. Until recently, however, they seldom studied adult society—seldom gave a look to the community. The community is now coming into its own as an educational resource, and we see the beginnings of a two-way flow between community and school. In one direction there is the flow of public interest in the school; in the other there is the spreading of the school and its activities out into the community. Accordingly the school is ceasing to be a place bounded by solid walls; school people are beginning to sense that there are enormous educational possibilities that lie unused in almost any community.

*If pupils are to learn to manage their communities when they grow up, they must observe, study, and work in their communities now. This is the citizenship reason for making use of the community. There used to be a*

time when pupils gained a great deal that was of educational value merely by living in a town, roving around it on Saturdays and during the summer months, watching adults at work, taking odd jobs, listening, and observing. But our communities have grown in size and complexity. The work done in most communities now is highly specialized. Observers are not welcome, nor would they understand all they might observe. The influences that bear upon communities now are far-flung—sometimes nationwide, often worldwide. Pupils need guides in their observing now. The school and its teachers must provide the guides. Programs of work experience, community study and observation, collecting firsthand data and materials for study, securing practice in the management of community enterprises and agencies—all these, when they involve going out into the community, must be dovetailed carefully with what goes on in the classroom.

*No one school has made complete use of its community's plant.* This resource has been talked about and used more than any other community resource. Especially is this true in work experience, in studying "our helpers," in collecting rocks, minerals, and products. But the modern view of the school—that it is a simplified version of society—means that many of the features of school could be dispensed with if we used the community more. The community *is* society. Why devise replicas of it? Both for observation and practice we should make greater use of the courts, school-board meetings, council meetings, police and protective services, professional offices, small businesses, heavy industries, craft activities, and communication and transportation facilities.

*We haven't begun to use the personnel riches that exist in almost any community.* If we are going to expand provisions in the school for giving pupils a Variety of Experiences (Practice 12) we are going to have to make greater demands on people outside the regular teaching staff. Probably the full range of clubs, interest groups, and similar enterprises that should characterize the modern school program for uncovering and developing the talents of pupils can never be completely undertaken under present conditions of staffing and financing. Teachers are already busy. Though it can probably be said with safety that every teacher ought to have some extracurricular obligations, using the full range of these activities in the school means that other persons are going to have to be drawn more and more into augmenting these programs.

Such persons exist in every community. If carefully selected they are

more than adequate for the job. There are the amateur astronomer, the gardening enthusiast, the traveler, the research scientist connected with a large industrial concern, the record-collector, the Sunday painter, the local historian. Such people are legion. They are all enthusiastic about their specialty; they delight in converting others to this enthusiasm. They serve with willingness, for the most part, whenever they are asked. Any school, in addition to its professional staff, should have a large assortment of lay staff members to talk to classes, sponsor clubs, engage in conferences.

*The community is not bounded by the city limits.* When we think of using community resources we mean drawing into the school resources from all over the world. For in this age of rapid communication and transportation the community is not bounded by any concepts of geography. We may invite to the school travelers who are visiting in the town; we may correspond with children in another country; we may even, as a few schools have done, set up an exchange of high-school students with other states and countries. The time may come (it has been talked about) when groups of students may use an airplane for a field trip, as they use a bus or automobile now. Although this possibility may be well in the future it still suggests the striking changes that may take place in schools when they begin to use community resources to the full.

### SAMPLE PRACTICES

The sample practices are classified as follows:

1. All Age Levels
2. Lower and Middle Grades
3. Lower and Middle Grades and Junior High School
4. Middle Grades and Junior High School
5. Middle Grades and Junior and Senior High School
6. Junior and Senior High School
7. Senior High School

### ALL AGE LEVELS

1. *Catalogue of Parent-helpers.* We have developed a questionnaire which is sent home to every parent asking about the parent's availability for help on trips, for consultation, for other services and about the parent's

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. A person learns only by his own activity. If we want pupils to learn to understand and manage the life of their community when they grow up, we must give them extensive, firsthand familiarity with that community while they are in school.

2. Participation enhances learning. (See Reason 2, Practice 7.)

3. The best way to learn a part in life is to play that part. (See Reason 1, Practice 5.)

4. Learning is reinforced when two or more senses are used at the same time. (See Reason 4, Practice 12.)

### SOCIETY SAYS:

5. The whole resources of society should be used in preparing new citizens for society. Modern American society finances public education far beyond what any previous society has ever attempted. It invests the time of its young people in a training period far longer than any previous society has ever allowed. It is but another step to make those schools even more efficient by drawing the whole community—its plant and its people—into the process.

6. A major hope is that the school is our most effective instrument for improving society. From their beginning schools have been viewed by legislators and other laymen as a major instrument of public policy. Great faith has been placed in the power of schools and teachers, as any study of school law will show. But the power of schools to improve the competence of the new crop of citizens is seriously limited when community resources are not used.

7. We should teach people to do better those desirable things they are going to do anyway. (See Reason 9, Practice 11.)

8. The school should make up for the work of those agencies of informal education which have deteriorated in modern society. (See Reason 10, Practice 11.)

## SAMPLE PRACTICES (Continued)

special talents, experiences, and abilities which might be of service in the instructional program. The results of this questionnaire are tabulated for each class and are kept up to date as new parents come in. Each teacher is given a copy of this "catalogue of parents." On occasion parents have helped in the office with secretarial and clerical work; they have helped catalogue library books and prepare library orders; they have served as substitute teachers, have given talks on various subjects to classes, and have loaned materials for exhibit. A catalogue based on a questionnaire of this type makes it much easier to use the personnel resources available in a community.

2. *Using Community Travelers.* In planning for our Latin-American fiesta and exhibit, with which we intended to culminate our study of the geography of the Americas we felt that our community could furnish us much help. We soon learned that many of the children and teachers knew people in the community who had traveled in Mexico and Central and South America. They were glad to come to the school to talk about their travels and to show their moving pictures. Our exhibit, which was open to parents as well as to children, was held in the school corridors. Picturesque costumes, dolls, and examples of native crafts and jewelry-making were loaned by generous friends in the community.

Frequently parents who have taken a foreign trip are invited to talk to our classes. Often they bring their own movies and collections of pictures and curios. In the past we have had firsthand accounts of the Mediterranean region, Hawaii, England, and Latin America.

3. *Community Traveler.* Recently a minister returned from an eight-month study of conditions in Greece. As the sixth grade was studying Greece I asked if he would come and speak to our class about Greece. He was very happy to consent. He came and not only told the pupils many interesting things about that country, but he illustrated his talk with colored slides that he took personally while touring the country.

## LOWER AND MIDDLE GRADES

4. *Train Trip.* Many children, in this day of automobile travel, have never been on a train. Consequently one of the most enthusiastically anticipated activities connected with our study of transportation is the train trip. The whole class is taken on a train ride to the next town about twenty miles away. We always make previous arrangements with the conductor who is to be on the train that day to explain things about the train and points of interest to the children along the way. School busses meet the children at the end of the train ride and return them to the school.

5. *Parent Talents.* The parents' association made a survey of parent talents and invited these parents to help supervise hobby clubs for children on one day a week after school and also to assist in various phases of work in the classes. Several mothers helped two groups in clay-modeling. One of these mothers owned a kiln which she made available for glazing and firing. Other parents sponsored an airplane-modeling group, a marionette group, and a music-appreciation group. A unit on the circus in one grade and one on South America in another were facilitated greatly by parents who had had some experience with the subjects in question. In the spring, nature walks were conducted by parents to study birds, wild flowers, trees, and minerals. A museum is being set up by still another group of parents. The museum will feature animal, insect, plant, mineral, and sea life. We are especially fortunate in having as leader of this group one who formerly served in the children's department of a well-known museum.

6. *Community Points of Interest.* Among the points of interest which we have catalogued carefully for the purpose of future trips are a museum, colonial cottages, private homes, apartment houses, department stores, grocery stores, the firehouse, a library, two printing establishments, the post office, the police station, town hall, a plant nursery, a bakery, the weaving room in the high school, a filtration plant, an incinerator, a dairy farm, pasteurization plants and a bottling plant, a felt factory, a lumberyard, a steel factory, a shipyard, the railroad station, water-front boats and ferryboats, and private airplanes. We have built each of these into our curriculum guide, just as we do book references and films, includ-

ing methods of preparation for visits to specific places, what to see, and plans for follow-up. We have established contact with persons at each of these places who await our call for arrangements for making visits.

7. *Trips with Purpose.* Whenever we make a trip I like to make sure that the pupils themselves have some definite reasons for going. If we have undertaken something in the classroom about which the children need information that is not readily available, I try to discover whether there is some place in the community to which we could make a trip that might yield this information. For example: In a corner of the room we were developing a small garden in which the children hoped to produce blossoms from bulbs to give their mothers at Christmastime. Would the flowers come out in time? No one seemed to know—nor could we find out from books. A trip to the local nursery was indicated. But first, to make sure that we got what we were going for, we spent considerable time in discussing and listing our questions and in designating an individual in the class who was to take the responsibility for getting the answer to each question. "We want to have bulbs blooming in December—when and how should we plant them?" was our first question. "What kind of bulbs would be best to plant?" was our next. But after we listed these two we became much more interested in growing things in general: "What makes plants come alive when they seem to be dead? Do all plants like to grow in the same sort of place? What plants make roots in water? How do insects help make new plants?" And we all agreed also to be on the lookout for ideas for our own little nursery.

#### LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

8. *Pupils at Post Office.* Our postmaster welcomes classes behind the scenes at his post office. He shows them how the mail is sorted, explains the workings of the post-office department, of postal savings, of the money-order system, and of other phases of post-office work; he takes them to various parts of the post office where each kind of work is going on. He also shows them examples of letters which never find their destinations because of poor addresses.

9. *Children of Other States.* I have been an exchange teacher and have used the experience to further my work with my pupils in my home

school. When I returned to my home school I interested my children in starting a correspondence with the class I had taught in California. In the fall they made two science notebooks containing spatter prints and pressed leaves from deciduous trees found on their way to school. Stories of the trees accompanied the specimens. The children realized that their stories would have to be good to make the California children see in their mind's eye just how these trees and the fall coloring in our town differ from the palm and eucalyptus trees of California. The California children replied with letters describing activities in their community. They sent copies of the magazine section of the Sunday paper which contained pictures of industries, homes, and parks in their community.

10. *Resources of the City.* Our elementary school is in a large city. Life in a large city is difficult for a youngster to comprehend because it is so complex. A large part of our educational program therefore involves making trips to see, study, and understand the important phases of life in a big city. The younger children learn about our transportation system (for they may be forced to use it, even at an early age). We make trips on the subway, on trolley cars, boats, and busses; we visit the trolley barn, the ferry dock, even the busy intersections of the subway at off hours. Older children study how our city functions and visit the markets, the mayor's office, the school-board office, tunnels and bridges, shipping centers, and the railroad station. We visit the places where their parents work: offices, factories, shops, etc.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

11. *Catalogue of Trips.* An eighty-eight-page *Catalogue of Excursions for Intermediate Grade Pupils* lists places in our community which have been found to have educational value when visited properly. Each place is listed with address, transportation routes, and methods for getting there; persons to make arrangements with beforehand, expense, time required, information to be secured there; new interests which might be developed by going there; and general comments.

12. *Local Photographs.* An excellent collection of pictures of local scenes is available in our audio-visual-aids library. The pictures are mounted and are fifteen by twenty inches in size, or larger. They are

kept in large cardboard folders, filed according to units in the social studies, sciences, arts, etc. They include pictures of various interesting pieces of architecture in our community, street scenes, scenes of business places, offices, city council in session, local laboratories, medical equipment, hospital interiors and exteriors, various seasonal scenes of the park all taken from the same position, and so on. People on our own staff photographed, developed, printed, and mounted these pictures.

13. *Loom Teacher.* In our discussion of Indian materials a number of eighth-grade girls said they would like to weave some small rugs and mats using Indian designs. I didn't know anything about weaving, nor did anyone in our school (for we do not have a crafts teacher). But I located a woman in our community who not only knew about weaving but knew how to make a simple loom out of inexpensive materials such as the Indians use. She came to the school several times and taught the girls how to weave.

14. *Study of Community Problems.* We have found that laymen who hold public office are very helpful. We have the children invite them (one at a time) to come to the school and to discuss their work with the children. The visits are welcomed by the children, who are full of questions. They gain a much clearer conception of the assessing of property, the supervising of a district, the work of the constable, board of education problems, and the like from the man who holds office than they do from a textbook. It sometimes happens that a father is the officer who comes and his child is quite thrilled over the occasion. Children should be prepared for the visit and some discussion held afterward so that the visitor is not received as a mere caller. If the group is organized it is good to have the class officers meet and introduce the guest speaker.

15. *Community Book.* The culminating activity of our social-studies unit on our community was the preparation of a large book (folio size) to be placed on display in the public library. The class worked in groups to prepare the seven sections of the book on houses, stores, manufacturing, resources, people, institutions, and entertainment. Each section of the book included maps, photographs, drawings and paintings, and carefully printed reports.

16. *Community Study.* Our seventh grade organized a community study. For information about the early history of the town class members went to the homes of descendants of early residents, obtaining interesting information, old pictures, and relics of early days. For the town as it is today, class members interviewed such citizens as the city council members, the fire chief, the police chief, school principals, a librarian, and officials at water works, sewage plants, and other utility installations. Trips were taken—some by committees, some by the entire class—to various industries, municipal buildings, newspaper plants, and points of historical interest. Citizens were invited to come to school and talk to the class about such subjects as welfare, public service, and town growth. Each pupil's experiences were recorded in attractive booklet form.

17. *Old-timers.* In a unit on local history, pupils interviewed descendants of early citizens, obtaining interesting information as told by Grandma and Grandpa. The information was then written, bringing in the use of the English classes, and bound for future reference. Old post cards and pictures were collected, models and maps constructed, and relics examined.

18. *Trip to the City.* Near the close of the school term my sixth-grade class always takes an educational trip to a nearby city. The pupils raise the money to charter a bus and buy movie film. The trip is planned and followed up in such a way that it forms the basis of a unit on the city. Pupils write letters to secure maps, booklets, and other illustrative material on the geography and history of the city. Letters are also written to make appointments for meals and tours. We visit as many of the points of interest as we can in a single day, with a previously selected camera crew of pupils recording our trip on film. A large class scrapbook of the trip is compiled, containing most of the material we have collected and articles written by every member. This scrapbook and the film form the basis for very fruitful discussions when we return to the classroom.

19. *Community Rocks.* In seventh-grade general science we study a unit on rocks and soils in which the emphasis is placed upon our own community. In the school museum we have several hundred specimens of local rocks, minerals, and soils which we use as concrete sources of investigation in this study of the community. This study is supplemented

by groups of pupils who make collections of their own in the fields and caves of our valley. Seeing and handling actual specimens make the words pupils read in books come alive. Using the local community as a point of departure we then branch out to other regions of our state, nation, and the world.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

20. *Pupils at Churches.* During our study of religions, a part of a unit on intercultural relations, our ninth-grade social-studies class was taken to visit a Protestant Church, a Roman Catholic Church, and a Hebrew Synagogue. The various clergymen pointed out and explained the symbols and discussed the basic philosophies of their respective faiths.

21. *Collecting Autographs.* For several years my sixth grades have been making a collection of authors' and illustrators' autographs. This year I conceived of a new way to expand this collection and at the same time get some useful practice in letter-writing. We secured names of authors and illustrators whose autographs were missing from our collection. Each pupil chose one or more to write to. He selected an author or illustrator whose work he especially enjoyed and composed a thoughtful letter. Interest has been very high, and the authors have been very understanding and cooperative. Since no one wished to write to a person who was in the public eye (like an author or artist) without having his letter absolutely correct, the children were very careful to master correct letter form, look up the spelling of words, take care with punctuation, exercise legible penmanship, and address the envelopes correctly. Many have been complimented by the authors for their interesting and well-written letters.

22. *Overseas Letters.* It occurred to me that the letters from the boys in the service overseas ought to contain a vast amount of information that should be valuable. In the great pile of mail reaching these shores (both old letters and those still coming) there ought to be accounts of new experiences that would make interesting reading for a larger audience. So I asked the students of all my English classes to bring in letters received from men and women in the services—letters descriptive of foreign

scenery, people, customs, language, or those telling interesting or amusing tales of exploits and adventures. I made it clear that parts of letters that were purely personal should be omitted.

Only occasional letters were brought in at first. Then students became aware of how much the letters were being enjoyed by all members of the classes, and more and more letters began to come in. The purpose was not only to create a good social feeling but to enlarge the horizons of the pupils.

So successful was this project and so interesting were many of the letters that we decided to build an assembly program around them. We secured illustrative slides from a visual-aids circulation library and excerpts from the letters were read over the public-address system. The presentation was highly successful and ranged from serious to humorous, from informational to pathetic. As the letters were read, appropriate pictures accompanied the reading.

**23. Community Astronomer.** In our town lives a retired minister whose hobby is astronomy. He is a very willing person and will give talks to the children in school, illustrated by his charts and astronomical models, or have the children come to his home, where he will allow them to look through his telescope and will explain to them about the different stars and planets. When we take up our unit on the stars they gain from him far more interesting information than I am able to give them.

**24. Community Industries.** To understand and appreciate the community, reports of local industries were made. Students visited industrial plants, wholesale houses, stores, etc., and interviewed managers, collecting such information as what natural resources had attracted the industry, sources of raw materials, and markets for manufactured products.

#### **JUNIOR AND SENIOR HIGH SCHOOL**

**25. Pupils at Court.** The police justice in our town has been very co-operative about permitting teachers of seventh- and eighth-grade classes to bring their pupils to visit his courtroom. He plans the court calendar especially so that appropriate cases will be tried while we are there. He usually hears a few cases of traffic violations, forceful entry, and similar

types of infractions. After court is dismissed he talks to the children in his chambers, telling them about the plan of the courtroom, the types of cases tried, and the general nature of the law and of the courts.

26. *Insurance.* When we study insurance I usually ask a local insurance man to come to our room, discuss insurance in simple terms, and show the different kinds of policies which there are. I usually ask a different insurance man each time.

27. *Furniture.* The girls in eighth-grade homemaking make a regular visit each year to each of the two furniture stores in our town in connection with our unit on home furnishing.

28. *Newspapers.* When we take up our unit on newspapers our local newspaper is very cooperative in sending its personnel to school to talk about various aspects of the newspaper business. The editor or one of his assistants comes to talk about news coverage; the advertising manager comes to give illustrated talks on advertising layout; a reporter comes to tell how he finds out about the news and writes it up.

29. *Evening Science Club.* A group of seventh- and eighth-grade boys and girls meet in the early evening at the school every other week. At that time a man who lives in our community—a scientist connected with a local industrial firm—discusses certain science principles with them and performs simple experiments.

30. *Vocational Talks.* One homeroom invited different persons from the community to come and talk for fifteen minutes on different vocations. Some of the ones selected were dentist, nurse, minister, reporter. The interviews were made, meetings were conducted, and "thank you notes" were written by the pupils.

31. *Community Choir.* To tie up the schoolwork in music to community activities I make it a point to contact choir directors of various churches when I find talent that could be in use in their particular congregations. The directors appreciate it, and it gives the students another opportunity to improve themselves and be of greater use to the community.

32. *Exhibiting Work of Community Artists.* The Art Club discovered upon investigation that we have a number of artists living in our community—professional easel artists, amateurs, "Sunday painters," print-makers, wood-carvers, and others. They made a list of these people and interviewed them by appointment. They got information on how the artist became interested in his work, where and how he studied, the volume of his production, his methods of work, and so on. The club decided that it would try to put on an exhibit of local artists' work and was able to persuade the artists to lend their work for such a show. Publicity was arranged by the students. The Radio Workshop (another school club) wrote and produced skits on the exhibit. A number of interesting contacts were made by the members of the Art Club during the course of making arrangements. Since the exhibit was valued at several thousand dollars it was necessary to arrange insurance through an insurance firm. Local newspapers carried stories of the exhibit which were prepared at the school and delivered to the newspaper offices. This exhibit was so successful that we have planned to make it an annual event.

33. *Promoting Community Knowledge.* Our county recently began to operate under a new system and few adults knew much about the new method of running their county. In our ninth-grade social-studies classes from six to eight weeks were devoted to the study of the new county organization. Some help was obtained from county officials, but their materials proved to be inadequate. The teachers made a study of the new type of organization and prepared booklets on various phases of the new organization. They used bound issues of periodicals on local government and other writings as background material. Then a deliberate attempt was made to carry the information of this unit to the adults. Homework assignments were planned which were essentially family discussions on various questions and topics related to the new county organization. Interviews were organized with various people in the community for the purpose not only of getting their ideas on questions but also of bringing their attention to some of the procedures under the new county organization. Pupils prepared talks for presentation to local organizations and put on panel discussions before parents' meetings. The responses of adults in these discussions and interviews were carefully tabulated in the class and points raised were used in class discussion to

give the pupils further insight into various local-government patterns and procedures.

34. *Sex Education.* A doctor and his wife recently volunteered to teach sex education in the schools. In the beginning the doctor talked to the sixth-grade boys while his wife talked to the sixth-grade girls. The program was arranged under the auspices of the parents' association and forms were sent home to be filled out by those parents who objected. At present a series of three lectures is being given separately to the boys and the girls of the junior high school and the senior high school. Some resistance to sex education disappears when this education is conducted by medical personnel.

35. *Local Ministers.* In our school we use our local ministers in two very interesting ways. Ministers help ease the case-load of our guidance counselor. Since much of a minister's usual duty involves individual counseling, most of them are adequately prepared to work with some kinds of cases. The ministers do this work entirely under the supervision of the guidance counselor, who arranges frequent meetings among them. Cases referred to them have to be very carefully selected in terms of need, type of problem, church affiliation, and so on. Some of the counseling is done in the school and some at other places designated by the ministers.

Ministers also come to our social-studies classes on a visiting-teacher basis for short periods of time to present the history of the church and the influence of religious thought on the development of western civilization.

36. *Township Officers.* One interesting feature of our civics program included inviting each township officer to visit the school and discuss the duties of his office. Each explained his work, bringing books and materials to exhibit. The children asked questions and discussed such problems with him as assessing property and computing taxes. Prestudy before the visit and checkup tests afterward constitute a complete unit on township government. The officials were very glad to cooperate.

37. *Town Council.* Members of the class in problems of democracy visit meetings of the town council to observe the actual workings of local

government. Upon return to class they discuss general procedure and problems discussed and record their impressions.

38. *Local Political Meeting.* When a local political club held a meeting to discuss revisions of the state constitution, arrangements were made for children of our ninth-grade social-studies classes to attend the meeting. In preparation they made a study of the state constitution which grew out of our general study of government. They sat in a body at the meeting. Various members of the classes had been elected by their group to raise certain questions at the meeting; these questions had been selected from a number which the classes had discussed and phrased. The children were introduced to various locally elected officials at the social hour which followed.

39. *Local Church Architecture.* In our study of medieval history we became much interested in the building of the cathedrals. We found that pictures were hardly adequate to an appreciation of Gothic and other medieval styles of architecture. Some one suggested that one of the churches in town was of Gothic architecture. We investigated and discovered that there were a number of examples of medieval architecture in our community. We found not only this Gothic church but another one of Romanesque style, one of Norman French, a house of English Tudor design, and many others. We talked to one of the local architects and uncovered many, many interesting specimens. We then planned tours to all of these places. The churches were glad to have us come, as were owners of the private buildings. The whole class had a very rich experience, and we all learned to look with interest at buildings which before we had passed by without a thought.

#### SENIOR HIGH SCHOOL

40. *International Affairs Club.* We have a club composed of students who are especially interested in international affairs. Their meetings include reports by various groups of the club members working as separate committees on planning for peace, world rehabilitation, etc. Most meetings have the services of speakers who have lived in other countries. These persons are usually from our community or other nearby places. The committee of club members in charge of the program for a given

day plans the entire meeting, arranges for reports, and secures the speakers.

41. *Italian-American Workshop.* Our community has a large group of people of Italian background. As a move in the direction of better inter-cultural relations we held a workshop during May and June in which the members of our advanced high-school classes participated. Advanced students in Italian, students of the literature classes, the dramatic and music groups, the journalism group, teachers of these classes, and various laymen in the community, both those of Italian background and others, all took part in the workshop.

We did a libretto for *Pinocchio* and set it to music from Italian operas. This musical was produced and played four times. We translated Italian poetry into English and English poetry into Italian; did the same with songs (both Italian and American), anecdotes, family incidents, and stories. Some of these were published in the Italian-language newspaper and some in the English-language newspapers of our community. Many of the songs were sung, with both Italian and English stanzas, by groups of pupils in assemblies, in public meetings in the town, and over the radio.

42. *Community Writer.* A former high-school graduate who has recently published a book talked to groups of high-school students who are interested in writing. She has had many stories printed in magazines and can tell the young people many things she herself has learned by experience.

43. *Community Offices.* I have senior commercial students take field trips to different offices and places of business to see the type of work they are interested in doing and observe methods used.



## Practice 14: INDIVIDUAL DIAGNOSIS

*Using Tests, Records, Observation, and Other Diagnostic Devices to Discover the Capacities, Past Achievement, and Present Needs of Individuals and Groups*

*Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b* Uncover and develop many different kinds of special talents in individual pupils.
- d.* Develop desirable character and personality in pupils.
- f.* Develop attitudes and habits of good health and safety.

WHAT should we do in class today? Especially with George and Henry and Sally? A teacher has three choices: (1) use mass teaching, (2) work by trial and error, or (3) diagnose and set up activities, enterprises, and drillwork that promise some surety of doing for George and Henry and Sally what ought to be done for them today.

Mass teaching is very inefficient. It occurs when all of the pupils are considered alike, taught alike, treated alike; when they all read the same part of the same book together, either orally or silently.

*Some important things must be known about every pupil.* Even that silent chap in the back of the room: What is his home background? Are there any abnormalities in his health history? What does he know and not know? What can he do and not do? What are the number and kind of his friendships? How smart is he in what kinds of schoolwork? What

other things is he smart in? Does he act his age? And so on. Not all of these need to be known for every child, of course. But before deciding what to teach and how to teach it, certain information about those to be taught is critical, if the teaching is to be effective.

*On the basis of individual diagnosis what pupils need is first determined, and then learning experiences are designed to fit.* Pupils who do not learn a given subject or activity as rapidly as others need special help or need to have the subject or activity specially designed or prepared for them. Pupils of exceptional ability need work of greater intellectual and creative content or tasks of greater responsibility, to challenge their capacities. Pupils with emotional disturbances need to have these taken care of before formal schoolwork can be undertaken efficiently.

*The major diagnostic tools in the hands of any teacher* are careful observation and sound judgment. Are there books, magazines, good conversation at home? What interests are revealed in the things pupils say to each other? What signs of change appear in the behavior of pupils? What is the response of pupils to books of different kinds and difficulty? What do these observations mean, and what should be done about them? No amount of information, no number of test scores, no set of records will take the place of sound judgment. Judgment is the exercise of common sense after all the facts are in.

*To reinforce judgment many types of tests are available.* Standardized tests include intelligence, achievement, reading-readiness, diagnostic, aptitude, and personality tests. But the teacher who makes some tests of his own learns to understand tests. Especially is this true of the teacher who makes and uses pretests. These are tests to find out how much pupils already know about subjects that are to be taught them. Even when there is a psychologist in the school the classroom teacher who gives some standardized tests himself learns more about the meaning of a test result. Those who are inexperienced with tests tend to rely on them too much.

*There are other ways to measure pupils than by means of tests.* Sometimes a pupil's use of books will tell a great deal more about his reading abilities than a reading test will tell. Sometimes a statement or an action will tell more than a personality test. Accordingly notes of revealing statements or actions should be recorded. Such notes are called "anecdotal records."

*Records reveal trends*, as test scores, results of health examinations, experiences, anecdotal records, etc., are entered year by year. Some schools take great pride in having an elaborate system of records. But the purpose of diagnosis is not to build a voluminous file that no one will take time to examine. The purpose is to help in teaching.

### SAMPLE PRACTICES

The sample practices are classified as follows:

1. All Age Levels
2. Lower and Middle Grades and Junior High School
3. Middle Grades and Junior and Senior High School
4. Junior and Senior High School

#### ALL AGE LEVELS

1. *Observation.* One thing a teacher can do is study each individual and make a check of strong and weak points in the development of personality. When a trait is discovered lacking we can deliberately set about to develop it. For example a second-grade boy stood looking solemn and thoroughly out of it while others played ball. His expression and attitude were even worse when he sang. I began on the playing field by coaxing him to help me field the ball. Then I commended him on his play and finally faded out of the picture, letting him play the position alone. Soon he was having fun. I commended his voice quality on the playground and, talking to him alone, got him to agree to help us sing. His face was attractive when he smiled and, being happier, he smiled more often. The next year he sang a solo for a program. Also he was willing to sell peanuts and meet the public at a festival. Of course this is only a beginning. He will need help all through school, but then so do many others. Each child presents a different problem that can be discovered by careful observation and attacked by judicious guiding.

2. *Quick Posttest and Pretest.* I give three short questions that can be answered in a few words at the beginning of the class period on the days designated for pupil recitation. The first question is a review question. The second question is taken from the lesson for the day. The third question is taken from the unstudied future assignment. I can see at a glance

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. Individuals differ in all sorts of ways. When you get a group of people together to do anything, some will be better at it than others. Dozens of abilities relate to success in learning. It is therefore inefficient to assume that all pupils are alike and to try to teach them all the same things in the same way.

2. You start to grow from where you are and not from some artificial starting point. No matter what a pupil's abilities, no matter what his past achievement, it is inefficient to try to move a pupil on without first finding out where he is.

### SOCIETY SAYS:

3. We should try to draw out the full capacities of everyone.

Democracy means, in part, that everyone shall have his chance. One's success in life may be measured by his achievement of personal efficiency through health, useful knowledge, skill in expression, and the development of his talents.

4. We should help those who have handicaps. In a democracy we try to compensate individuals for deficiencies in health, wealth, and inheritance; and at the same time draw from each whatever he can give. This is one of the major functions of the teacher. But first he must know the strengths and weaknesses of each individual.

## SAMPLE PRACTICES (Continued)

whether a pupil needs aid and further study or explanation on the present, past, or future assignment.

3. *Testing Program.* Our testing program is very thorough and we attempt at every point to enable teachers to use the results in the best possible way. We give a group intelligence test at three- or four-year intervals. We use different tests each time in order to get a measure of a pupil against more than one kind of norm. For example we give the Kuhlman-Anderson at one time and the Otis at another. The Binet has been given to almost every child in the school at one time or another. This usually occurs when children are in the primary grades. The school psychologist, who gives the Binet, analyzes the results with each teacher so that the latter may have a clear idea of the meaning of the test and the capacities of each pupil.

In addition we give achievement tests each year. Results on achievement tests are not necessarily used for grading purposes, nor are teachers judged in any way by means of these tests. The achievement-test results are used to enable us to know a little more clearly where we are compared with national norms on the various skills and fields of knowledge that these tests test.

We are experimenting with other tests: prognostic tests in arithmetic, reading (reading readiness), algebra, modern languages, and aptitude tests—including assembly, form-board, peg-board, art-aptitude, and musical-aptitude tests and tests of spatial relations and finger dexterity. We eliminate tests that do not seem to be especially helpful and add others that show some promise.

4. *Parent Questionnaire.* Measures of a youngster's day-to-day behavior are perhaps more important than test results. The purpose of a questionnaire filled in by the parent at a conference between parent and teacher on the first day of school is to get leads on the extent and nature of a child's development. It includes notation of his day-to-day activities, indication of special abilities and interests, his manner of play, his friendships and acquaintances, nature of responsibilities given him at home, his home behavior, health, and special needs.

The teacher compares these findings with the pupil's behavior at school.

Sometimes special experiences are designed at school for a pupil in the light of the findings; sometimes maladjustments are forecast and remedied.

5. *Testing Leadership Talent.* I make a special attempt to discover special ability in leadership, in reasoning and organizing ideas, and in social responsiveness. Indications of these talents can be perceived even as early as the first grade. The ability of a child to gain and hold the attention of an informal group indicates a tendency toward leadership. The same ability is shown when other children gravitate toward a child, consult him, and accept his decisions. Such a child can often organize and plan a project and divide parts of it among others. I am careful to foster this ability without encouraging a child to become aggressive. It is fairly easy to distinguish between true leadership (which is usually quiet and efficient) and a sort of false leadership that is often strident and grows out of feelings of inferiority.

Evidences of reasoning ability can also be observed in a child's conversation and in his response to thought-provoking questions. An interest in other children, a sympathetic attitude when things go wrong, a tendency to share and listen to others—all these indicate a degree of social responsiveness.

6. *Personality Needs.* Much of my work in personality development is done through individual conferences. For example when I observe pupils who are shy or timid I generally approach them during some time other than class time and suggest that we have a conference. I am generally able to suggest some activity that will help to bring them out of themselves. I have steered some into joining clubs, others who were good students into helping some pupils who were not doing so well in their preparations. During our conference I found out that one girl definitely liked to work with small children. Through the aid of the kindergarten teacher I arranged for her to spend some time in the kindergarten telling and reading stories to kindergartners and helping the kindergarten teacher supervise work and play periods. I found another shy boy who was interested in plants and growing things and arranged for him to take charge of introducing new plants and flowers into the classroom. Also I arranged with the art teacher for him to use some of his art time in learning to arrange flowers artistically.

7. *Personality Rating Chart.* We use an interesting diagnostic device for measuring the extent to which pupils are liked by other pupils. Those whose scores are low are worked with individually so that their personality traits may be improved. Each pupil is rated confidentially by each of his classmates. Friendly, unfriendly, grouchy, cheerful, happy, unhappy, like to work with him, would like him for my best friend—these and a number of other personality characteristics are used in the ratings. The results are tabulated for each child and are filed as part of the permanent record. The ratings are repeated every two or three years and differences noted. Each child's ratings are confidential. The older children write or check blanks; the younger pupils whisper their ratings confidentially in a conference with their teacher. It is frequently possible to discern an incipient personality maladjustment at an early age, and in many cases of dissatisfaction with school, classmates, or teacher it is possible to trace the causes in these ratings.

8. *Summaries in Record Folders.* Our cumulative record folder has places for most of the conventional data—I.Q., achievement-test results, health tests, etc. However a large part of the folder is given over to space for each teacher who has the child throughout the grades. In this space is a place for grade, teacher's name, attendance record (summarized), family history, notes on parent conferences, and a space where the teacher can write a yearly summary giving salient details on the work of the year to guide the next teacher.

9. *Book Records.* We keep a record of every book a child reads from the time he enters school until he leaves the sixth grade. This record includes books read in groups (so designated) and books taken from the room library or the school library and reported as having been read by the child. These records are on file in the school office and serve as a guide for teachers in choosing books for group reading and for recommended individual reading. The record is an indicator of a child's developing interests and as such is very valuable to the observant teacher.

10. *Speech Survey.* An articulation test is given to all children in our school system during the first month of every school year. A list of his children's speech difficulties is given to each classroom teacher. Children with articulation difficulties meet in groups of six or seven once a week

for special work with the speech teacher. Children who successfully pass the test three or four years in succession are usually omitted from further testing.

11. *Speech Diagnosis.* It is very important that the teacher make every effort to check new pupils for speech defects at the very beginning of school. I do this informally through conversation. We say nursery rhymes and poems together, tell sentence stories about riding on the bus or what is done at home to help mother. Very shy children are asked, "Who walked with you when you came in from the playground?" or, "Tell us what you see on your way to school." Any event of interest is utilized to make conversation, and my ear is constantly attuned for any kind of speech defect.

12. *Physical Health.* A strip-to-waist medical examination is given to every girl and boy in our school system every other year. We have two physicians, a man for the boys and a woman for the girls. They are not hurried and give a complete examination. Copies of the report of the examination are furnished to parents, nurse, and teachers. Corrections that can be made by the nurse or teachers are indicated and taken care of. A follow-up is completed by the full-time nurse to make sure that parents take care of other corrections. The medical staff and nurse have three special rooms well equipped to carry on their work. First aid is administered by the nurse or by the physical-education supervisor, who is a trained American Red Cross instructor. Every teacher in the system has taken the American Red Cross course in first aid. A communicable disease chart is sent to every parent with directions to keep the child out of school and call a physician on indication of certain symptoms listed on the chart.

13. *Dental Health.* Our dental health program includes a semiannual mouth inspection. Results for each child are kept on a card in chart form so that his progress or retrogression can be observed immediately. During the inspection the hygienist takes time to give individual instruction as it may be needed, demonstrating the correct way to brush teeth, pointing out results of lack of care, and so on. A report of the findings goes immediately and directly to the parents following every dental inspec-

tion, together with advice and suggestions to remedy whatever defects are present. A copy of this report goes also to the classroom teacher.

After the dental inspection the hygienist and nurse carry on a program of home-visiting and parent conferences to assure a proper follow-up to the inspection. They meet with teachers for the same purpose. They also furnish help to teachers in the correlation of dental health with their instructional program. Classes for parents in dental health and dental education are held, and a number of exhibits on dental health are set up in connection with various school projects.

14. *Alertness to Physical Defects.* I am a language teacher. Nevertheless I am constantly on the alert for signs of physical disability which may be hampering the work of my students. During the past year, for example, I have sent five students to the health room for eye tests. All five of these had developed defective vision since the previous tests. All five are now wearing glasses and the quality of their work has improved. I follow the same practice with respect to speech. Whenever a student's ability to master language-pronunciation is poor I check with the nurse to determine whether the fault lies with defective hearing. Any poor work is with me first of all a case for determining whether physical defects may be the cause.

15. *Teacher-principal Conferences on Individual Progress.* Five conferences are held during the year between each teacher and the principal concerning the progress of individuals in the teacher's class.

The first conference is held during September. The teacher comes to the conference with a work sheet including data on the pupil's age, intelligence-test score, previous standard-test scores, and other information to be found in the pupil's folder or secured by talking with the pupil's previous teacher. A discussion of the background of most of the pupils in the class occupies most of this first conference, with some estimate as to what can be expected of various pupils during the school year and what adjustments may be necessary in handling individuals.

The second conference, held during October, narrows down to those pupils that do not seem to be making a satisfactory adjustment. Sometimes the work may be too difficult or too easy, or there may be some other 'actor that may require the assistance of the psychologist or guidance specialist.

The third is a group conference held with all teachers at the time of the issuance of the first report cards. At this time the degree of success of various pupils is discussed in relation to the marks indicated on their report cards.

The fourth conference occurs at midterm, again an individual conference between teacher and principal. Teachers discuss those pupils whom they feel will not be able to complete the work satisfactorily by June. Parents are notified and consulted in these cases and plans for the individual pupil are made.

The fifth conference is held in May. Standard test results are discussed and the best plans for each pupil for the next year are outlined.

This plan has increased the amount of teacher consideration of individual pupils, since the conferences emphasize our desire not to have all pupils meet a certain mythical standard, but to accomplish what can be reasonably expected of them. Parents also are pleased that the principal and the teachers know the children and their backgrounds so well and that they seem interested in providing successful experiences for all of them.

**16. Anecdotal Records.** As described widely in the literature anecdotal records are thumbnail descriptions of significant acts or statements of individual pupils revealing growth trends. Though admirable for enriching a pupil's cumulative record they are not widely used by teachers because of the chore of writing them down. To facilitate this chore some teachers prepare a five- by eight-inch card for each pupil. These, filed handily in a desk drawer and thumbed through every Monday afternoon, invite the making of brief anecdotal records and serve as a check upon those pupils for whom nothing has been recorded.

**17. Parent Conference.** A boy of above average intelligence became a problem. He would not complete any work for any teacher. His father was called for a conference and said that the boy had been different ever since his mother died two years previously. After talking the case over with the psychologist we decided that the ninth-grade English teacher, who seemed to have the right kind of personality for the job, should spend some extra time with him—not necessarily on his school-work, but to chat with him, get him to run errands, have him help put material on the bulletin board after school, help clean up her room,

and so on. The boy's work and attitude improved, since these activities supplied the attention and the attachment which he had missed.

#### LOWER GRADES

18. *Observing Pupils at Play.* Put modeling clay, paper, scissors and paste, cloth, needle and thread, small tools and small boards, paints and brushes, and the like on tables or shelves in one part of the room. Tell elementary school children that they may work with whatever they wish. Watch the results and see where the interests lie. Leadership may be discovered as well as talent for cooperation. Tendencies toward selfishness and toward shyness may also be observed in certain pupils. In such a situation a teacher can learn a great deal about the individuals in a new class and can make observation of children's activities the basis for future guidance.

19. *Arithmetic Progress Chart.* I have devised an arithmetic progress chart by which it is possible to tell at a glance how my primary children are developing in their mastery of certain arithmetic skills. The chart is divided into six columns with the headings: (a) Name of each child, (b) We can count by 1's to 100, (c) We can write by 1's to 100, (d) We can count and write by 10's to 100, (e) We can count and write by 5's to 100, (f) We can count and write by 2's to 100. Each child writes his name on his line in each column as he earns the right to do so.

#### LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

20. *Testing by Tryout.* I try to find out what each pupil can do well. I make a special campaign along this line early in the year. I note special abilities during the following activities: the informal story hour, impromptu dramatizations, concerts in which pupils go to the piano and "play" their impressions of a thunderstorm, rain, a cat chasing a mouse, a bear walking in the woods, etc. I attempt to set up a number of such activities the major purpose of which (in addition to being fun) is to determine special abilities of children. Then I attempt to develop these.

Other such testing situations occur, of course, in drawing and painting, elementary carpentry work, and modeling. Similarly the behavior of children in the library offers an excellent opportunity to note development

of interests and abilities. The kind of book a youngster picks up, the kind of magazines and pictures upon which he puts attention are all indicators of growth.

21. *Pretesting.* Standardized tests in reading, spelling, and arithmetic are given to pupils of Grades 3 through 8 at the beginning of the year. The purpose is to determine where the emphasis should be placed in skill-teaching and which children need help in various phases of skill-mastery. A work sheet prepared for each pupil shows phases of the skills tested in which he is above or below normal. Pupils who score high on spelling but low on arithmetic computation, for example, are relieved of a great amount of study and drill in spelling, and the time gained is put upon arithmetic computation.

22. *Periodic Check-testing.* Every six weeks the arithmetic teacher check-tests the class: addition on Monday, subtraction on Tuesday, multiplication on Wednesday, division on Thursday. Individual weaknesses are called to the pupil's attention, and individual help is given during the testing week. A chart is prepared and kept posted for the ensuing five weeks showing individual attainment on various phases of arithmetic as measured by the test and indicating points of deficiency which pupils should work on. The chart is often consulted by pupils in connection with carrying out seatwork assignments.

23. *Self-evaluation.* Each sixth-grade pupil keeps a line graph in spelling and a bar graph in penmanship. There is also a class graph in arithmetic. Children are much interested in marking their graphs and in watching their progress. They gain experience in the use of interpretation of graphs—an important modern method of communicating arithmetic information.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

24. *Home-survey Form.* I have developed a pupil survey form that each student in vocational agriculture fills out, giving me information about the boy's home, his farm, his family, problems on the farm, and the boy's plans for the future. A place is provided for a map drawing of the boy's home farm. This not only provides the teacher with valuable

information about the boy and his background, but it forms the basis for determining teaching content and gives the boy an opportunity to analyze problems on his farm which are of practical interest for him to undertake in his schoolwork.

25. *Experience Themes.* We use experience themes a great deal in ninth-grade composition. Pupils are encouraged to express their thoughts and feelings freely on anything and everything. No theme is read in class if the pupil writes: "Please do not read in class" at the bottom of his paper. For a teacher who is looking for more than proficiency in English these themes often furnish clues to personal problems that can be brought to light by a little careful investigation.

26. *Autobiography.* Early in the school year I have each of my beginning high-school pupils write me a letter in which he tells me all about himself. I list on the board the many things in which I am interested: (a) preschool experiences, (b) home life, (c) elementary-school experiences, (d) hobbies, (e) particular interests and desires, (f) friends and acquaintances, (g) things I can do well, (h) things I can't do well but would like to do well, (i) health, and (j) ambitions. The pupils may use as many of these suggestions as they wish. I promise not to reveal anything that is told me, and I assure them that this assignment will in no way affect their grades.

My purpose is twofold: to discover proficiency in written English, since I am an English teacher, and to learn more about the pupils themselves. I sometimes invite a pupil to come in and talk with me about what he has written. In some cases I try to find an occasion in casual conversation to refer to something that a pupil has written and tell him that I would like to know more about it. Sometimes I ask a pupil if there isn't some one with whom he would feel free to discuss the matter, or I suggest some one who I think might help him. Sometimes there is something that I can do through our regular classroom work.

27. *Performance Achievement Test.* Toward the end of each school year a "test table" is set up in the physics laboratory. This table is used to test each student individually by the teacher-conference method on his ability to read and operate a very wide range of practical instruments,

gauges, and other apparatus. In all there are between fifteen and twenty instruments and pieces of apparatus used—all common tools of the physics laboratory. These instruments and pieces of apparatus are graded according to difficulty of operation, with individual values assigned to each. Some of those used are micrometer caliper, triple beam balance, micrometer screw, English and metric graduated electric zero set, barometer, gas, electric, and water meters, maximum and minimum thermometer, platform balance, English and metric graduated vernier caliper, ammeter, voltmeter, and aneroid barometer. Each student is asked to solve problems involving each of these instruments, and his performance is graded on the basis of accuracy and time taken. This test supplements the regular paper-and-pencil examination with a different and more practical kind of measure of a pupil's achievement.

The same kind of performance test can be used in other subjects: for example in mathematics—measuring the height of buildings, hills, flagpoles, etc. in trigonometry; measuring volumes and angles of buildings, areas of lakes or playgrounds in geometry; and so on.

#### JUNIOR AND SENIOR HIGH SCHOOL

**28. Variety of Aptitude Testing.** Any student in our high school may take as many different kinds of interest and aptitude tests as he wishes. We have a wide variety of tests to choose from. He has an opportunity to discuss the results of each test, or of several tests, with the guidance adviser so that he may clearly understand what the results show. No single test is ever used for purposes of advising, but on the basis of trends shown by a battery of tests students are encouraged to get experience and to do reading in the fields for which they seem to demonstrate aptitude.

Among the tests which we use are: Bennett Mechanical Comprehension, O'Rourke Mechanical Aptitude, Stenquist Mechanical Aptitude, MacQuarrie Test of Mechanical Ability, Detroit Clerical Aptitude, Moss and Hunt Aptitude Test for Nursing, Minnesota Paper Form Board, Victory Corps Aeronautics Aptitude, Engineering and Physical Science Aptitude, Stanford Scientific Aptitude, and various college aptitude tests.

Most of the tests are scored by the Educational Records Bureau or the Psychological Corporation. A profile made of test results is used in individual conference. This profile is related in the conference to the

pupil's school record and discussed in connection with his past high-school plans.

29. *Aptitude Analysis.* I had each of my eighth-grade pupils in group guidance write a composition on what he would like to be when he grew up. Then I gave the Kuder Preference Test to show aptitude under such classifications as mechanical, artistic, literary, musical, social service, clerical. The results were discussed with the children when the comparison was made with what they had written in their compositions. It is interesting to note that there was close agreement between composition and test. Since we were concerned in our eighth-grade guidance work that pupils have some life plan to work on—not that they necessarily must select their life work at that time—we drew the interest of the parents into the matter by giving them a tea. The psychologist interpreted the results of the test and I presented the material from the compositions. Both pupils and parents became interested in planning for a successful future and high school course choices were made with much greater care and interest than is usual.

30. *"Main Street" Norms.* National norms established for standardized achievement tests do not often reflect local conditions. What do local parents and employers expect the graduates of the school to have accomplished in spelling, arithmetic, reading, etc.? Expectation will depend upon what the general level of achievement is on Main Street. Our school sampled the community's achievement in skill subjects and established community norms. We then evaluated pupils' work in the skill subjects in terms of these as well as the national norms, realizing that employers and parents would expect a school graduate to measure up at least to the fellow next to him on the job. Usually the school can demonstrate, in placing a former pupil, that he is better in spelling and arithmetic computation than the average of those in the office to which he is going.

31. *Building Our Own Tests.* Our department of mathematics has constructed two forms of a test in arithmetic computation. It consists of twenty-eight questions bearing upon the twenty-eight types of computation which members of the department have agreed upon as fundamental. One form of this test is given in September and the other in June to all pupils of the seventh, eighth, and ninth grades and to all pupils

taking the two-year course in general mathematics in the senior high school. Tabulations are made showing the percentage of pupils in each grade missing the several questions of the test. The purpose of the first test is to discover those pupils who need remedial help in arithmetic on certain of the twenty-eight types of arithmetic computation. These pupils attend a remedial arithmetic class. The purpose of the second test is to determine the effectiveness of remedial measures used. The results of both tests are compared for each pupil in terms of the twenty-eight types of arithmetic computation.

During the last two years these tests have been given to all secondary-school pupils, regardless of course. This has been done because pupils taking academic mathematics no longer study arithmetic and it is necessary to keep track of their continuing mastery of the fundamentals of arithmetic computation which they last studied in the ninth grade.

32. *Pretesting for Background.* A ninth-grade teacher wished to tie the study of world history to current world affairs (e.g. comparing Russian-American rivalry with Roman-Carthaginian rivalry; comparing United Nations beginnings with United States beginnings, etc.). An elementary true-false and multiple-choice test on world affairs prepared by the teacher revealed very little knowledge or interest in present world problems. But three questions in this test, all about the Second World War, showed remarkable interest in that subject. The teacher designed a short unit on the history of the Second World War, drawing upon back issues of newspapers and magazines and the experiences of ex-GI's in the high school. This was gradually expanded to include a study of conditions that made the war and of issues growing out of it.

This was a class in world history; the attack on this subject as a whole was considerably delayed, but when it eventually came the class was well motivated for it and possessed the background to make it worth while.

33. *Physical-fitness test.* We give all senior-high-school boys a physical-fitness test—the Navy Strength Test and the United States Ranger Tests. The events are taught to the boys and they go through a reasonable period of conditioning. Following this period the tests are administered and the results are recorded on individual cards. This first test becomes a boy's "base score." Our plan calls for repeat tests on the same events at certain

specified times. Every time a boy takes a test or a series of tests over again his scores are compared with his base score. His score ought to show a reasonable amount of improvement each time he is tested. However, if he has failed to keep up his physical condition his subsequent score can be less than his base score. When a boy's score shows a decline because of an illness he is given a new base-score test after a reasonable time for recuperation. Through this method each boy is competing with his own base score rather than with others. We prefer this method since there is always a great variation in physical development among a group of boys of any age.

34. *Graduation Questionnaire.* To help us with intelligent counseling of students about their plans for their post-high-school life we have developed a system of having all seniors fill out a questionnaire as to their plans. We ask them to indicate such items as whether they plan to go to college, the college of their choice, what they would like to study at college, why they are not going to college if they are not going, the line of work they would like to enter upon graduation, etc. We ask them to list special accomplishments—summer and part-time work experience, type of work, where they worked, best subjects in school, etc. Each home-room teacher then makes a study of these questionnaires early in the year and during the year plans several counseling sessions. We attempt to lead each student to do the thing which seems best for him under the circumstances. Decisions during these conferences are summarized in notation form by the teacher and filed with the questionnaire in the senior-placement record file. This file is kept current through periodic follow-up, whether the student goes to college or to work.



## Practice 15: VARIED DRILL DEVICES

*Using a Variety of Devices for Teaching Skills and Knowledge Through Drill Designed in Terms of Individuals*

*Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.

DRILL is probably the oldest of all teaching practices. It seems that schools have always used it—drill in spelling, practice exercises in arithmetic, memory work on facts, poems, outlines. It is probable that schools will always use drill to some extent. Though drill itself is old, the way in which it is used in good schools is new.

*Pupils who don't need to be drilled are not drilled.* Some pupils grasp fractions, for example, very quickly though most pupils of the class may need considerable drill in order to gain facility in computation. Pupils who don't need drill on fractions, however, may need it on other things. First the teacher finds out about the needs of individual pupils before prescribing drill.

*When drill is given it is highly individualized.* The teacher possesses a wide range of drill devices to take care of almost any kind of situation and to take care of the variations which pupils show in native ability, past experience, and interest. The teacher prescribes, in other words, from a well-stocked drugstore. For one child or small group of children drill work in arithmetic may be very different from that for other children in the same class.

*Various appeals to interest are used.* It has never been shown that learning is good for you simply because it is difficult. Interest is a power-

ful force, and whenever it can be used it increases the efficiency of learning. Interest appeals involve games, pictures, diagrams, and other activities of various sorts.

*Drill has meaning.* The skills and facts that are learned through drill have a purpose, either for now or for later. The teacher takes time to get pupils to see the value of what they learn through drill.

*Other practices have superseded drill in some instances.* There are some situations in which newer teaching practices are much more efficient than drill. Consequently the total amount of time spent on drill has been greatly reduced in good schools. The time will be reduced still more, we may expect, as new and more effective practices are invented. For example we don't have to assume that we shall be forever doomed to teaching those difficult words on the spelling list through drill and drill alone. Inroads have already been made on the problem of teaching skills directly so that pupils learn through abundant natural use of the skill without recourse to drill. A direct way of developing "spelling sense" in pupils may be just around the corner. In fact some teacher not yet heard from may already have invented one. To some extent experience has given us a key—a very bright pupil, for example, sometimes masters a new skill automatically through self-motivation.

At the present time if spelling (or arithmetic processes, or grammatical usage, or central facts of American history) *must* be learned, good schools see that they *are* taught. If pupils are not able to learn them through any other method, then they are taught by means of drill.

### SAMPLE PRACTICES

The practices reported here are classified under the following headings:

1. All Age Levels
2. Lower Grades
3. Lower and Middle Grades
4. Middle Grades and Junior High School
5. Middle Grades and Junior and Senior High School

### ALL AGE LEVELS

1. *Lantern-slide Drill.* I use lantern slides in drilling on word recognition and number combinations. I find the method more flexible than

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. What gives satisfaction tends to be repeated; what is annoying tends to be avoided. Learning is more efficient if a pupil tries to master what fits his abilities and if the work he does seems to him worth while. Practice makes perfect only when it is the right kind of practice.

2. When an organism is not ready to act it is painful for it to act; and when an organism is ready to act it is painful for it not to act. These two sides of the same truth mean that drill is more efficient when pupils have reasons of their own for doing it.

3. Individuals differ in all sorts of ways. (See Reason 1, Practice 2.)

4. Abundant, realistic practice contributes to learning. (See Reason 2, Practice 6.)

### SOCIETY SAYS:

5. A common culture requires of its members a common set of skills and facts. There are some things which everyone should know, some things which all who live in our society should be able to do. These things all schools must teach, if possible, to all pupils, by one method or another.

## SAMPLE PRACTICES (Continued)

using cards or writing on the blackboard; furthermore the pupils' attention is easier to get and hold, and they enjoy the novelty of the lantern-slide method.

I make various types of slides. For word recognition, slides are made by outlining pictures with India ink on shellacked glass; on another slide four words are written in India ink. Both slides are flashed on the board at the same time, and directions are given to draw a circle around the word (projected on the board) that goes with the picture.

A similar procedure is used for sentence-reading. Three or more pictures drawn on a slide are projected on the board, and directions are given on a second slide—to draw an X on the bird which is flying, for example.

For number-work I make slides containing the various combinations. These are flashed on the board and children write the correct answer under the combination. I flash two of these on each slide, and an interesting game is to have the children divided into teams, the members of each taking turns in order. When one member has finished, the slide is removed—each team scoring a point when a member finishes first.

2. *Estimating Measurements.* Too often pupils do arithmetic exercises *almost* correctly but make some little mistake in the process that makes a large error in the final answer. Furthermore it is startling and sometimes discouraging how uncritical pupils can be of their results. Common sense, it seems, would tell them that it wouldn't cost \$6,000 to paint a house—yet such answers are common with uncritical work.

A good antidote is practice in *estimating* measurements and other quantities—trying by common sense to get as close an answer to a problem as possible without using any calculation at all. In addition the practice of estimating improves arithmetical conceptions generally.

At the beginning of the week I give each child a narrow strip of paper; it is not large enough for computation—only estimated answers may be written. The problems involve such examples as: Estimate in feet the width of a picture frame on the classroom wall; estimate in yards the height of the door; estimate in feet the width of the room; estimate in ounces the weight of a book. .

After the estimating period we then check to see how close the estimates

came to the actual measures. Surprisingly the averages of the estimates have, from the beginning, shown only slight variation from the actual measures. But in the beginning there were a number of pupils who made great errors. Growth of the class in ability to estimate accurately has been excellent. The estimating period is very popular with them.

3. *Adventures with Words.* Vocabulary-development must be considered in any program that aims to increase a child's ability to use words and ideas fluently and exactly. So we study words. We have fun with words, for words are interesting. When children begin to know which words belong to the same families and what their word-forefathers were, they become fascinated. We look at families of words: telegraph, telephone, teletype; telegraph, autograph, photograph, mimeograph; and learn the meanings of the various parts. We use dictionaries in our hunt for original word meanings and learn that almost every word is a figure of speech and originally meant something else. There are also a number of books on words which we use: *A Word in Your Ear, Just Another Word*, and others. Sometimes we have charades based on synonyms, antonyms, and homonyms. These charades are fun and make words clearer and more interesting. Making little words out of big words is also an adventure much enjoyed by the children.

The game of adverbs is also fun. One child chooses an adverb. Then another asks a classmate to walk in the manner of the adverb (or talk or read). Scrambled words, crossword puzzles, and riddle games are a few of the other word adventures we enjoy. I find that reading, writing, and spelling are all enhanced by these games.

4. *Writing Stories for Speech Correction.* The speech-correction groups needed some short stories containing drill sounds (P, B, T, D, L, R, S, etc.). Each pupil could choose the sound he wanted or have one assigned to him. He was then asked to write a short story paying particular attention to variations in the use of his given sound. These stories were sent to the typing class to be typed for use in the speech classes.

5. *Basic Names and Dates.* One of my classes took the basic list of names and dates in American history suggested by the National Council for Social Studies and lettered these on cardboard. We then posted them above the board where they can be easily seen from any part of the

room. Being constantly in view they will more likely be permanently identified by all students during the course of their visits to the room. The lists also lend themselves easily to five-minute drills in spare-time moments that are otherwise wasted.

6. *Kinesthetic Spelling.* When pupils who reach my junior-high-school class are deficient in certain basic skills, I try to teach them what I can, realizing that I may be more successful (though not completely successful) because of the practice which they have had under elementary-school teachers, and that I may be more successful because the pupils are more mature. At any rate I have found the kinesthetic method to be successful with some pupils who were very poor spellers. The word to be learned is written on paper. The pupil is asked to trace the word with his finger, spelling it to himself until he is sure he knows it. He then takes his pencil and writes the word without looking at the tracing model.

7. *Pupil Aides in Drill.* In teaching heterogeneous mathematics to groups I have discovered that there are always a few pupils who will learn and understand how to do new types of problems much sooner than the majority of the class. After I have covered the work in a new type of problem I give a test to determine the ones who need additional drill. Then I divide the class into small work groups and place a pupil who has mastered the new type of problem in each group. His duty during drill period is to help the slower members of the group. I find that this plan not only provides far better individual instruction among the slower pupils but creates an interest during the presentation of new types of problems, because each pupil tries to master the new problems in order to be chosen as an instructor.

8. *New-word List.* In social-studies classes the pupils keep a list of new words. I cull them from future assignments to make the starting list, and any two pupils can nominate a new word to be added as we go along. Each word is printed with large letters on a chart and kept in some conspicuous place in the room for easy reference. Each word is also entered in pupils' notebooks with definitions, sketches or pictures, and sample sentences. We call these new words their "key words" because they unlock the meaning of the new material they are studying. These words are

used as often as possible—in discussions, drills, tests, and reports, until they become part of the children's vocabulary.

9. *Number Drill on Window Shade.* I use a light-colored window shade on which all the number combinations, addition and subtraction, are printed without any answers. For rapid drill I use this and save time and board space, as I do not need to put the combinations on the board each time. When not in use the shade—mounted on regular roller-shade hooks above the board—can be rolled up out of the way.

#### LOWER GRADES

10. *Making Books to Develop Reading Readiness.* To develop reading readiness my kindergartners made the following books in connection with various activities:

They each made a fruit and vegetable book in connection with our store unit. Pictures were crayoned, cut, and mounted. I labeled them all in manuscript writing: "Red Apple," "Yellow Banana," etc.

They each made a toy book at Christmastime. Pictures of toys were cut from catalogues and magazines and again labeled: "A Baby Doll," "A Blue Wagon," etc.

They each made a travel book at the time they were interested in transportation. Pictures were made out of construction paper and mounted on the pages of the book. I labeled them as they told me: "Automobile," "Boat," etc.

They each made a house book in the spring. This was intended to get them to observe and be interested in objects found in their own homes. The house was represented by the cover of the book, which was cut to shape. The pages of the book represented the different rooms of the house with various articles—furniture, people, pets.

They each made a farm book in connection with our farm unit late in the year. The barn was the cover of the book, cut to shape, and inside were various animals crayoned and cut to shape and mounted on the pages of the book. I wrote short sentences from each child's dictation about each animal: "Cows give milk," "Sheep give wool," etc.

The pages of the farm book were numbered so that the same animals appeared on corresponding pages in each child's book. These books were used for group reading, giving the children their first experience in group

reading—finding the right page, turning pages, reading the various stories about the cow that each had dictated, etc.

11. *Hurry-up Helper.* An egg-timer mounted in a cardboard figure—like a cook, clown, or farmer—is a help when speed is wanted. Whether it is putting on wraps, putting away toys, or finishing work, the children of my second grade try to beat the falling sand.

12. *Homemade Tachistoscope.* To teach pupils to read by phrases and sentences instead of by words I use a homemade tachistoscope of cardboard. I draw or paste attractive pictures on the outside and cut out a space just the size of a phrase or sentence to be flashed. Then I prepare a story about the picture and flash it sentence by sentence by passing it behind, so that each sentence shows for an instant in the space. The children enjoy this practice and immediately give their attention. We talk about the picture first and the story it tells. Then we flash the story, sentence by sentence. The children read silently. Then we talk about the story. There is great variation in their ability to read by fixating sentence by sentence, and I work with children in groups of comparable ability when reading in this manner. I point out to them that this is the way I should like to have them read their books—by taking in as many words at a glance as possible.

13. *Scoring Games.* I make use of a number of scoring games that are on the market for giving my second-graders practice in number combinations. But I have to paste tags over the numbers to change the scoring method. Practically every scoring game on the market uses numbers ending only in 0 or 5. I change 5, 10, 15 to 2, 3, 4 or whatever numbers will give combinations that we are working on.

14. *Reado Played Like Bingo.* Each player has a card marked into twenty-five blocks. In each block there is a printed word. I show a flash card of a word. The children playing look at the word silently and then at their cards. If a child has the word on his card he covers it with a small strip of paper supplied for the purpose. The child who has five words covered in a straight line in any direction is the winner. We then stop the game and check the words he has covered to see if he is right. He calls the words out one by one as he lifts the strips of paper. I raise

each word card as he calls it. The other children watch carefully to see if he is right.

15. *Games for Reading Readiness.* A number of common social games can be used for purposes of developing abstract concepts expressed in words. For example "Pinning the Tail on the Donkey" is a good one. The blindfolded child tries to pin the tail in the right place, much to the glee of the rest of the class and of himself when he has removed the blindfold to see how close he has come. We then decide whether his effort was *high, low, to the left, to the right, above, under, too far*, etc. The game furnishes an opportunity for much repetition of these concepts without boring the youngsters.

16. *Primary Reading Drill.* I make new reading materials by taking a series of pictures from old reading-readiness workbooks. These pictures have definite narrative possibilities so they are most appropriate. I paste them into individual booklets with appropriate stories that I have made up. These stories provide added repetition of the basic vocabulary in new and different story situations. Because these new storybooklets are short, children just beginning to read find them very enjoyable.

17. *Etiquette Drill.* The children in first grade enjoy planning a table setting and serving paper food to learn table and serving manners. Some children may fringe and color a plaid paper tablecloth in sections that can be pasted together. Others decorate paper plates or cut silverware and side dishes. Some are trained to serve, others to be served. Table-manner drills are performed. Paper foods are served but the saying of grace and the action is real. Birthdays usually supply the motivation for this drill.

#### LOWER AND MIDDLE GRADES

18. *Developing Word Meanings.* I cut pictures from such magazines as the illustrated weeklies and mount them on construction paper. Words that are suggested or illustrated by the pictures (usually abstract words like *panic, alert, or credulous*) are printed on separate pieces of paper and placed at random on the chalk rail. The pictures are posted by means of scotch tape on the board above. I then ask pupils to match words and pictures. The first child is asked to find the word in the chalk rail which

is most descriptive or indicative of picture number one; the next child looks for a word which goes with picture number two; and so on. In this way abstract words are given concrete meanings in pupils' minds and an interesting drill device is provided. I put up new words on Monday and have children try to match them without help. On Tuesday the children use dictionaries and any other help they can find in matching words and pictures. Words and pictures are left up until Friday, when a retest without help is given. Although the exercise itself is carried out by each child silently, I ask him to pronounce the word when he has made a successful match.

This is a practice which originated without our remedial-reading teacher. But other teachers found out about it and are now using the same practice—of course with more difficult words and concepts—with their normal classes.

19. *Spelling Game.* In a club we have organized to help children who have great difficulty with spelling to get on friendlier terms with that subject, we have worked out a number of games. "Win the Pack" is one of the most successful. Each child is given three blank cards (halves of small filing cards). On each of these cards he writes three words which he chooses from the list of words for the week. He makes each card different although he may repeat some words which he considers hard. The children separate into small groups and several games are played at once. The leader holds his cards in his hands. The others lay theirs face downward on their desks. The leader pronounces the words on one of his cards to the player at his left. If the child spells the three words correctly he wins the leader's card and becomes leader. If he misses any of the words the leader takes a card from his desk and pronounces to the next player, continuing until some one spells successfully and wins his card. The game continues until the playing time is up or until one player wins the whole pack.

20. *Dictionary Race.* This works well at odd times when there are a few minutes to spend. Each pupil is given a dictionary. Right and left halves of the class compete as teams. Some one on Team A designated by the captain gives out a word. All others on both teams try to find the word first. The winner reads the definition, but in order to score a point

for his team he must use the word correctly in a sentence. Then some one on Team B gives out a word, and the race is continued during the time available, with the game going to the team with the highest score at the end of the time.

21. *Practice in Following Directions.* The ability to follow written directions is one of the primary reading skills. Yet we do not usually make practice in this skill an important part of our elementary-school reading program. For this purpose I use a game which the children all enjoy. We divide the class into two teams. Each member takes his turn. With back to the board he waits for me to write down a definite, brief direction. At a signal he turns, reads the direction, and executes it if he can. If he cannot do it the chance is referred to a member of the opposing team. Each successful execution of a direction scores a point for the team.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

22. *Slide Rule in Arithmetic.* I have introduced the slide rule in my eighth-grade arithmetic classes. After a little preliminary manipulation answers are very easy to get on the slide rule. With slide rules in our hands we talk about a number of things that we would like to have answers to and bring in data to use for our computations—baseball-batting averages, percentage of participation of each class in Red Cross drive, quick division and multiplication of large numbers, and so on.

I find that the students have a better grasp of the meaning of fractions, decimals, and number relations as a result of working with the slide rule. This, of course, does not take the place of teaching the methods of regular pencil and paper calculations.

23. *Vocabulary-building.* I wanted to improve (a) the children's speed in finding words in dictionaries, (b) their ability to understand words from context clues, and (c) their ability to pronounce new words correctly. Work in our social-studies class was considerably hampered by the children's vocabulary deficiencies in reading social-studies materials. I decided to devote fifteen minutes each day to studying three new words chosen from future assignments. These three words are posted on the bulletin board and designated "Quiz Corner." Each child finds these three words in the dictionary as quickly as he can and copies them into

his "My Own Dictionary," where he translates the dictionary definition into words he uses daily. Correct pronunciation has to be indicated also. We always devote some time to hearing the words pronounced correctly. Soon the children are introducing words they encountered elsewhere.

**24. Responsibility Grouping.** For arithmetic I divide my class into two groups. Group A contains pupils who are able to work independently. Group B contains pupils who need much help from me. The grouping is not so much upon the basis of arithmetic ability as upon the basis of a pupil's being able to take the responsibility to go ahead and accomplish a certain amount of work. Pupils in both groups work individually—at different places in textbooks and in the workbook and on different kinds of exercises of different levels of difficulty. When errors common to all crop up I discuss them orally with the whole class.

I prepare and mimeograph a sheet for each topic to be covered in the year's work. The sheet has references to practice examples in three different textbooks. Pupils in Group A work these exercises, check with the answer sheets, and record their own progress on individual graph forms. When they have completed all the exercises on a topic they ask me for the test on that topic. I check this for errors, looking for types of errors that may require review and relearning. When the test is satisfactory I give the pupils the mimeographed sheet covering the next topic.

Pupils of Group B follow about the same plan, except that I have to give them closer supervision on the practice exercises. Any child in either group who encounters a topic that he cannot undertake alone is free to call upon me for help. A pupil may be moved from Group B to Group A when I feel that he has ability to work independently.

**25. Drill Cards.** In teaching fractions I use "fraction cards." Each card consists of four questions—one each in addition, subtraction, multiplication, and division of fractions. These cards are divided into four groups, each progressively more difficult. Cards are all different.

Each child works independently. I do not stress speed, since this has a tendency to cause dislike of the work and some nervous tension. I am more concerned with accuracy. The cards are filed in a box to which the children may have easy access, and each child has a graphic record form on which he indicates which cards of which group he has successfully

solved. Except for the first group the exercises on the cards are more difficult than the work in the text and are not required of all children. They are presented in the form of a game.

#### MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

26. *Abundant Practice.* I always try to have the pupils practice as many different ways of using a skill as possible. For example in arithmetic we always do a great deal of graph-making when we come to that part of the course. The children make graphs of their spelling scores, graphs showing tardiness and attendance for a month, temperature graphs, graphs of the frequency with which members of the class listen to radio programs, graphs showing the range and frequency of pupils' heights, and so on. The particular advantage of using such material is that children learn that graphs depict real facts and information, just as their own graphs depict material which they have gathered.

27. *Drills in Everyday Tools.* I organize drills and exercises in each of the following tools: bus schedules, timetables, calendars, almanacs, dictionaries, encyclopedias, atlases, indexes, glossaries, tables of contents, bank and corporation reports, statistical sports reports, stock-market reports, graphs of all kinds, radio timetables, and so on. Knowledge of these and a facility in their use is needed by practically everybody; the materials themselves are cheap and easy to get.

28. *Who-is-it Program.* Radio influences the lives of pupils and adults. Both are greatly interested in the "who" and "what" type of program. Using this kind of program in history class has made quite a successful review device.

I have adapted the radio "who-is-it" program for a drill game. When we complete a unit we list all the characters who appeared in it. Each pupil selects a character. I check the selections to see that each is different. Next the pupil writes eight clue sentences and numbers each one. He then takes his turn reading his clues in order. Each member of the class records the number of the clue on a slip of paper and enters, opposite the number, his guess as to the identity of the character. This method is better than oral response because some get the character before others and writing the responses enables all clues to be read; pupils

are able to show whether they got the identity of the character on the first, second, third, or whatever clue.

We also use the same procedure for a "what-is-it" program, using events from the unit we have studied rather than characters.

29. *Homemade Arithmetic Problems.* An old device in arithmetic but still a good one, involving much careful reasoning, is having pupils make up their own problems in arithmetic on whatever process is being studied. Our group has made class and individual books of illustrated original problems growing out of the background of the pupils themselves. Where children are not talented in drawing, magazine pictures may be used. The children especially enjoy making up a series of problems tied together in a story.

30. *Fact Drill.* Occasionally upon the completion of a unit of study pupils are asked to prepare a list of four or five questions based upon the material covered. Sometimes the class is divided into equal parts and the questions are used in a contest between sides. If the question is answered by the person who is called upon, two points are scored. If he cannot answer, another member of his side may score one point by a correct answer. In the event that no one on the opposing side can answer, two points may be scored for an answer by the side from which the question came, provided that the answer comes from a pupil other than the questioner.

This same drill can be adapted for developing English vocabulary, Latin vocabulary, for arithmetic or algebra drill, and similar purposes.

31. *Word Drill.* In our class on old-world backgrounds we meet many new words that must be understood and used frequently in the particular unit being studied. To help the class learn to pronounce, spell, and use these tool words correctly, I allow about ten minutes for drill at the end of the class period two or three times a week. Any pupil may identify any word used in the reports that day, then call on another pupil to define the word. The pupil giving the word then goes to the board and writes the word. If the wrong definition is accepted or the word is misspelled on the board, that word is lost for that day. I use a bar graph. When the word is saved it fills a part of the bar. I have five sections on

the graph corresponding to the five sections into which the class is divided. The section filling in the most bars is allowed some special privilege. I have had excellent results in teaching the pronunciation, spelling, and usage of difficult words in this manner.

32. *Latin Drill with Film Slides.* This practice has been developed by a teacher who is also an amateur photographer. In *Caesar* there are a large number of phrases made up of several words which occur again and again. The problem of translating is greatly simplified if a pupil knows these phrases, and the method is much more efficient than learning vocabulary words separately, even though there has been very little drill on conjugations and declensions. Drill in the latter is developed after much reading has been done, interest built up, and variant word-endings observed in the text itself. The phrases are typed and then photographed on film-slide rolls. While a pupil operates the film-slide projector the class memorizes these phrases in concert, beginning with the few most frequent and continuing with others at regular drill periods each week. Pupils may also drill themselves individually at times other than class periods. Later conjugations and declensions are learned in the same way; different conjugations and declensions are compared on the same slide.

33. *Year-end Drill.* Throughout the year I try to provide a set of rich experiences for my second-year Spanish class. It is a class above average in ability. We have conversation periods, study Spanish culture, review Spanish films, listen to and make recordings, read Spanish newspapers and magazines. At the same time I must prepare the class for an examination at the end of the year on the fine points of grammar and the other academic phases of Spanish. I tell of this dual purpose at the beginning of the year. Three weeks before examination time the class meetings become cramming sessions on grammar, translation, composition, etc., in preparation for the examination. The students understand the purpose and their drill is well motivated. They have had a rich experience in the language, and drill is more meaningful. In this way what may be an important learning experience for most of the year is not destroyed by the bugaboo of an academic examination. With a class of able students no difficulties have been encountered in their passing the examination.

34. *Cutting Mistakes with Gremlins.* I made a chart on eighteen- by twenty-four-inch manila drawing paper showing in three-inch letters the various mistakes beginners make in lettering: no space between letters, no space between lines, no space between words. Then I drew and colored funny little people who were shown pushing the letters, lines, and words together. This I posted in a prominent place, and it greatly reduced lettering mistakes.

35. *Shorthand Testing.* In a shorthand class, frequently at the end of a dictation, the pupils will have very little idea of what the context of the dictation was because they were concentrating so hard on the making of correct shorthand outlines. To develop listening ability along with the writing of shorthand characters, the pupils are asked not to transcribe from their shorthand notes but to close the notebook and recall the facts contained in each letter dictated, jotting them down as recalled. Pertinent questions such as "What amount of money was the check written for?" "Why were the goods returned?" or "Why was the discount not granted?" are asked by the teacher so each pupil can see whether he was able to recall the important facts of each letter. Using this procedure two or three times a week is very effective in teaching pupils to think about what they are writing in shorthand.

# Practice 16: REMEDIAL AND RE-FRESHER TEACHING

*Using Courses, Units and Other Activities  
Specially Designed for Those Pupils Who  
Need Help*

*Use This Practice to . . .*

- a. Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.*

SHALL we fail George because he did not learn enough about Indians this year? Shall we fail Sally because she did not master long division? Shall we keep Fred out of the class on modern social problems because he did not study his American history last year?

Such questions are not realistic, because they assume that people grow by a process of leaping hurdles—the “standards” that are set up from grade to grade. Actually people, just like other organisms, grow gradually, not by leaps. This is true of physical growth; it is also true of mental growth. And different individuals grow at different rates. So it is impossible to start with a class of thirty first-graders and have them all move along together, stay together, learning all alike and achieving alike all through school until they come to the twelfth grade. Schools are still set up very much as though this were true, however. Old-time practice screened out the slower ones, failed them, let them fall by the wayside. Modern educational practice is more realistic.

*Remedial courses* were first set up for pupils who were having difficulty in learning to read. It was discovered, however, that those who have trouble are not always the intellectually dull. Remedial classes are

scheduled outside the regular classwork with specialists trained in the field. Remedial courses and remedial units have now been developed in fields other than reading.

*Refresher courses* take account of what old-time practice usually neglected—that it is easy to forget. Typical of outmoded practice is the practice of teaching arithmetic for the last time in the eighth grade and giving a high-school student four years in which to forget it before taking a job. Or teaching a girl two years of Latin and giving her two years in which to forget it before she embarks on a career of nurse's training where, it is sometimes claimed, a knowledge of Latin is helpful. Refresher courses are sometimes set up outside regular classwork on a flexible schedule (one week, two weeks, three months) to take care of unusual or special needs or to repair lapses of memory.

*Service classes* for certain purposes are another type of remedial arrangement. An English class may be turned into a service class to help pupils learn to master facts and skills necessary for writing papers in science or social studies. A service class in mathematics may help pupils learn measurement for shop or fractions for a cooking class. Only those who need service classes go to them, while regular classes are freed for other pursuits.

*Special curricula and classes* for the hard of hearing, the blind, the physically and mentally handicapped intend that every child shall have his chance, regardless of his handicaps.

With *groupwork* any teacher in his own classroom may do what is done on a school-wide basis through special courses, classes, and curricula. It is impossible for any class to lack *some* individual variation. Whether variation is great or small, any teacher who works with the class divided into groups can do remedial, refresher, or special work as needed.

### SAMPLE PRACTICES

The sample practices are classified under the following headings:

1. All Age Levels
2. Lower and Middle Grades and Junior High School
3. Middle Grades and Junior High School
4. Junior and Senior High School

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. The average pupil is largely a myth. Grade standards are an average. But any standard that you can set will be too difficult for some, too easy for others. The achievement of a group scatters over a wide range—only a few are at the "average" point. A far greater number are scattered above and below the average.

2. Growth is a steady, continuous process, and different individuals grow at different rates. It is impossible for a class of first-graders to move along all together until they come to the twelfth grade. Each individual learns, but at his own rate. His growth is steady; he does not leap from grade to grade.

3. You start to grow from where you are, not from some artificial starting point or standard. It is impossible to move a pupil on from some point or grade standard that he has not yet achieved.

### SOCIETY SAYS:

4. We should try to draw out the full capacities of everyone.

(See Reason 3, Practice 14.)

5. We should help those who have handicaps. (See Reason 4, Practice 14.)

## ALL AGE LEVELS

1. *Coming Early.* Over a period of years I have found that having pupils come before school for extra help is very much better than having them "stay in" after the other children have been dismissed.

As soon as I realize a child is having difficulty, I write a note to the parent asking: "May John come for help *one half-hour* before the regular session?" Parents have been very cooperative and grateful. Children generally prefer coming early to staying late, which so often seems like punishment.

## LOWER AND MIDDLE GRADES AND JUNIOR HIGH SCHOOL

2. *Matching Picture and Sentence.* I have found that the interest of slower children has been stimulated by the use of colorful mounted pictures illustrating parts of the various stories we read. These pictures are placed in the chalk rail and as sentences are written in manuscript on the board a child chooses the picture which the sentence tells about. We do this silently, the child reading the sentence to himself and picking the picture to match. Other children read the sentence silently also and check if a mistake has been made. I reverse the process also by showing a picture and asking the children to find the sentence which tells about the picture.

3. *Grouping for Reading Across Grade Lines.* The three other teachers in the fourth and fifth grades in our building and I have combined our classes for reading-instruction. We classified the children from results obtained by the *Iowa Basic Skills* test and the *My Weekly Reader* test. But since we were dealing with four grades instead of one the pupils in each group were closer together in ability to read than is normally the case in regular class grouping. Each teacher had sixteen groups available for her pupils instead of four, and each teacher took the responsibility of teaching four of the sixteen groups.

4. *Fluid Organization.* Ours is a special school for socially maladjusted children. We have no grades. New pupils are received into a vestibule class where they stay with the same teacher all day. A pupil may come into the vestibule class at any time and may remain in it for an indefinite

period, until he seems well enough adjusted to make the change to a regular class.

Regular classes are organized on the basis of social maturity, as determined by teacher-judgment with the help of various tests. But this grouping is always flexible. A pupil may be moved from one group to another or from one teacher to another, as seems advisable.

*5. Pupils Select Own Spelling Level.* My unselected group of sixth-graders represents a wide range of ability and achievement. When I give out spelling workbooks I put a large number of books of different grade level on a table at one side of the room and ask pupils to select the book that each feels he can work on best. They study the books and, sometimes with my help, select one, the words of which they can work with. Some of them may select books at the second-grade level, but when we start to work I say: "Now you know some of these words, I'm sure. Let's not start right at the first part of this book. Let's begin near the middle and see how it goes" Most of those who have chosen easy books are able to go very fast and before long are in a book of higher grade. They are encouraged at their rapid progress and take greater interest.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

*6. Army Materials.* Slow readers of advanced age were not challenged by the typical immature story contained in books with vocabulary simple enough for them to read. We secured some copies of the *Army Reader*—a manual used to teach illiterates in the Army. It became very popular and was more successful in challenging the boys than any type of material which we had tried before.

*7. Speech Helps.* The speech-correction work in our class is turned into a series of games with the help of our speech specialists. We appoint a committee of four students each week to make note of the speech errors made by each student during the week. This committee then makes its report and the teacher and specialist confer on what to do for these pupils during our regular speech period. A boy who has been found to swallow the ends of his words is given practice exercises such as pronouncing *sleep, sleet, sleek, sleeve*, so that the others of the class can clearly distinguish what he is saying. A girl whose voice has been judged

inaudible is asked to dictate a spelling lesson; she has to make herself heard by every pupil in the room. For almost every speech defect which is not serious a remedial practice can be invented which involves the whole class, turning the speech-correction work into a game.

8. *Remedial Farm.* When boys persistently give trouble in school because of personality and social maladjustments, our recourse is not continually sending them to the principal's office. Our school system owns a seven-acre farm on the outskirts of the city which has been designed to offer a simple rural type of economy, work, and life to boys ten to sixteen years of age who are not able to cope with the strains and stresses of modern city life. There is a home building in which the teacher in charge lives and in which the boys have their meals. There is a barn and a gymnasium and a shop building which also contains a classroom. The boys have built most of these buildings; they keep them in repair and are building others. Farming, fruit cultivation, caring for animals, terracing, flower-planting, building walls, walks, goldfish ponds, landscaping, and decorating building interiors furnish the major activities.

On a place of this sort there always seems to be plenty of productive activity to engage in. Each boy has individual responsibilities. These are graded to accord with the extent of a youngster's general capacity to take responsibility. In grade these responsibilities range from keeping the shop swept and currying the horses to supervising all that goes on in the barn and operating the kitchen. Incoming boys are first tested with minor jobs and progress to greater responsibilities as their social adjustment improves.

A boy is invited to come here, not requested or required to come. The first week is always a tryout to determine whether he should stay. Hours are 9:00 to 3:00 as in any other school; boys are transported by bus. Adjustments are 85 per cent successful in a typical period of nine months.

#### JUNIOR AND SENIOR HIGH SCHOOL

9. *Nonreading Ninth-grade History.* Henry had an I.Q. of eighty-seven on a group intelligence test. Though he was a docile and cooperative pupil, a "good" boy, still I knew that he would not be able to understand the words or master many of the abstract concepts necessary to medieval history. There was very little authentic reading material that I was able

to secure for him to use. He said he enjoyed working with tools—wanted to be a carpenter like his father. So I encouraged him to build us a model castle and secured pictures and designs for him to go by, showing him where he could get others as he might need them. He turned out a very creditable job. He did very little reading of history along with the other members of the class. But he was a very good listener and gained much from their reports on reading. He was a good talker too, and from his explanation of his castle and his description of the life which went on in it, it was clear that he came to absorb in this fashion a great deal about medieval history that would never have come to him had I attempted to require him to put his major effort into reading.

10. *High-school Reading.* Policies of promotion based on age and social maturity mean that more children are coming into the high school who have not mastered some of the skills that in the past we have required there. The high-school teacher can do one of two things: blame the elementary school for what it didn't do and do nothing himself; or discover what skills certain high-school pupils need to be taught in order to do the work required in high school and then teach them.

Our high school has followed the latter policy with respect to reading (although a similar plan could be devised for any skill). We give standardized reading tests at the beginning of the ninth grade. Those children who fall more than a grade below the ninth-grade norm are required to attend a special service class which meets three times a week. In all other subjects he continues with his regular class. The teacher of the special class uses a variety of remedial reading text- and workbooks selected from many that are on the market. Frequent tests are given. When any individual can score above the required level on the occasion of one of these tests, he may leave the remedial class.

11. *Bread-and-Butter Mathematics.* Our general mathematics course tries to humanize the subject and present pupils with mathematical problems of the kind that all adults at some time or another must solve. This course is intended primarily for those students who do not intend to go to college. At the beginning an interesting form of orientation is used—grown-ups are brought into the classroom to discuss the mathematics knowledge which has been useful to them. For example former service-

men tell of the needs for mathematics which they encountered in the armed services.

Students work on problems of map-reading, calculating scales of miles. They use different types of maps—road maps on which they plan a trip and calculate distances from scale reading; surveyors' maps from which they read steepness of terrain from contour lines, and so on. They use common formulas in many ways. They study the elementary mathematical principles of science, aeronautics, and navigation. A particularly interesting part of the course is the study of community budgets. They interview city officers in connection with this study of budgets. Those students who work during vacation and in spare time prepare income-tax returns.

**12. *Pupil Experts.*** Students who have been absent and need to make up work and students who are having difficulty with some phase of their work receive help from specially qualified classmates who have done exceptional work in the various school subjects. This arrangement supplements our regular study hall and may eventually supersede it. The pupil "experts" are stationed in the library at each period, a different one for each period, according to their schedule for study-hall time. At one table there will be an algebra expert, at another a French expert, and so on. Pupils who need help in any of these subjects are assigned to report to one of these tables, as the need may be, instead of to the regular study hall. Not more than six or eight are assigned to a table at any one time. When the work has been made up or the difficulty improved, those who have been helped return to the regular study hall. This arrangement has worked very well where the deficiency has been a purely subject-matter one. In addition the pupil experts gain from the plan—they are given extra recognition for their accomplishments and they are given an opportunity to function in a leadership situation.

The group of pupil experts is somewhat like a club, having periodic meetings where methods of helping other students are discussed by the faculty sponsors of this pupil-help plan.

**13. *Mathematics Variation.*** For those pupils who do not move very fast in mathematics we offer intermediate algebra in a class that takes a year instead of a half-year. We also have a special mathematics class for those pupils who show little promise mathematically and who need a

"bread-and-butter" mathematics to get them ready for the normal mathematical activities of life.

Those pupils who show exceptional mathematical talent are allowed to finish arithmetic in the middle of the eighth grade. They then form a fast-moving group and are kept together throughout the high school. To qualify they must pass a rigorous mathematics test in the middle of the eighth grade. They finish the normal high-school mathematics work in half a year to a year less time than the usual pupil. We then offer them a half year or more of advanced mathematics to prepare them for college mathematics, or as preparation for engineering or other technical work.

**14. Refresher Arithmetic.** Our high school requires proficiency in eighth-grade arithmetic before allowing any senior to graduate. All juniors take an arithmetic achievement test. Those failing to achieve the eighth-grade norm are required to schedule an arithmetic service course during their senior year. This course carries no high-school credit. It is only a refresher course. And a pupil may drop it at any time that he satisfactorily passes an arithmetic achievement test. Different tests are used each time. (There is a wide selection on the market.) The purpose of this practice is to make as certain as possible that graduates of the high school can do simple arithmetic—frequent criticisms to the contrary were formerly heard. Yet the way the school curriculum is designed for some students, the last look they get at arithmetic is in the ninth grade and they have three long years in which to forget it before they graduate.

**15. Interschool Tie-up.** There are a number of specialized schools in our city school system. In order to get the special advantages which may exist in one of these schools it is not always necessary for a pupil to enroll. A pupil who is registered in one high school, for example, may attend for part of a day or part of a semester or year the city vocational school or the farm school and still receive credit for attendance in his home school. The same plan is followed with respect to classes within the high school; for special purposes a pupil may attend classes with some other group and receive attendance credit with his own group. In this way it is possible to make highly flexible arrangements for various pupils who need them, and it is not necessary for a pupil to break contact with the friends and acquaintances he has developed in his school career in order to get special experiences in another class or school.



## Practice 17: ENRICHED TEACHING

### *Using Enriched and Expanded Activities for Those Pupils Who Have Little Difficulty in Achieving What Is Normally Expected*

#### *Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.
- b.* Uncover and develop many different kinds of special talents in individual pupils.

HELEN, in the sixth grade, is an exceptional child. She has little difficulty mastering arithmetic, geography, English. But sometimes she gets impatient and does not do all her exercises; sometimes she sneaks a novel behind her geography book. Once, during arithmetic, she brought up a question about calculus, but the teacher told her she would have to wait until she got to college to find out about that subject. Once, during geography, she said she wished she could find out more about how the continents and oceans got their shapes.

There are in practice three courses that can be followed with Helen and those like her: (1) She can be the "star" pupil and answer those questions of the teacher's which no other pupil can answer but sit mentally idle while the others catch up. (2) She can be allowed to skip grades and finish high school at the abnormal age of twelve or fourteen. (3) Her intelligence and energies can be enlisted in special studies that expand her mental horizons, in individual activities that correspond with her interests, in extra responsibilities that challenge her maturity. And her contributions can be so organized as to enrich the work of the rest of the class. Although Helen is superior there are others who range markedly

above average. Similar practice may be used with them, differing only in degree.

*Individual enterprises* may be used to challenge the capacities of the gifted. Teachers have been found in whose classes pupils, for at least a part of the term, were working on as many as five or six different projects or units. Groups of varying sizes were carrying these on, though in some instances a single pupil was working alone on something which might or might not be related to what others were doing. At the same time the resourceful teacher—through reports, talks, or exhibits—finds ways in which the others in the class may share in the work of the gifted.

*Group enterprises*, in which the whole class undertakes to explore a field, study a problem, or carry on a project, make a highly useful technique for capitalizing on the work of the gifted. In a group enterprise there is ideally something for every talent, every level of maturity.

*Special resources and facilities* are highly desirable in any school, elementary or secondary—whether a science club for the dozen top scientific talents in the school, a class in philology for the highly linguistic, a museum, a workshop, a special laboratory, or a special library collection to challenge the maturity and capacity of the capable. By enriching his own classroom with a library corner, work tables, science equipment, magazine files (much of it built, borrowed, or given) any teacher may do in his own classroom what is done on a school-wide basis through special clubs, classes, and facilities.

### SAMPLE PRACTICES

The sample practices given are classified under the following headings:

1. All Age Levels
2. Lower Grades
3. Middle Grades and Junior High School
4. Junior and Senior High School
5. Senior High School

### ALL AGE LEVELS

1. *Special Period.* A short period each day is set aside to be used by any pupil upon request. This period was originally intended for poetry; it now includes music and dramatics. One group produced a short play,

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. The average pupil is largely a myth. (See Reason 1, Practice 16.)

2. When an organism is ready to act it is painful for it not to act, when an organism is not ready to act it is painful for it to act. These two sides of the same truth mean that it is wasteful to deny to alert pupils what their curiosity, interest, and maturity indicate they are ready for.

3. Growth is a steady, continuous process, and different individuals grow at different rates. Those whose rates of growth are rapid must cultivate their capacities or the result is frustration, waste of talent, waste of time.

### SOCIETY SAYS:

4. We should try to draw out the full capacities of everyone.

In this complex age our people must know more than ever before; and the skills needed for today's work are more complex than ever before. Therefore all the abilities of all our people—whether they be great or small—must be developed to their fullest possible extent.

**SAMPLE PRACTICES (Continued)**

student coached and managed. The pupil's choice of subject and delivery are free from criticism at this time. All necessary criticism is done indirectly in the English class later in the day. Student participation and response have been remarkably high.

2. *Fourth-graders Teach Kindergartners about Birds.* When my kindergarten children began asking a number of questions about birds I suggested that perhaps there were some children in an upper grade who might help them. I talked with a fourth-grade teacher and found out that indeed there were. Several of the pupils from that fourth-grade class volunteered to find out all the information they could about winter birds in our locality. They consulted a large number of reference books and secured pictures of birds in color. After they secured their information they worked on simplifying the language so that the kindergartners would understand. Then they presented an illustrated lecture in the visual-education room. Each fourth-grader took a few birds. He told a story about each bird and another child projected a picture of the bird through the opaque projector. The great value of this activity was the developing of a sense of helpfulness toward younger children. Furthermore, the fourth-graders—all able students—had a real challenge to take a subject and make it interesting to some one else. A number of preliminary lessons for the fourth-graders were concerned with the interests of very young children, how they learn, and how one should talk to them.

**LOWER GRADES**

3. *Silent Reading for Superior Pupils.* I usually have in my first grade four or five (sometimes more) pupils of very superior reading ability whom I work with in a special group. Our groupwork follows this pattern: Each child makes a choice of a book to read from a shelf of about twenty-five books appropriate to the level on which we are reading at the time. Among the twenty-five are books on many different subjects. These children sit in a circle around me reading silently for approximately twenty pages. Occasionally one comes to me pointing at a new word that he does not know. Then each comes to me to be checked on what he has read. I may ask him to read me a short portion of his twenty pages;

or I may ask him to tell me a part of the story he has read; or I may ask him some questions about what he has read. I do not need to check on all that he has read, but I need to check on enough so that I may know that he is reading with comprehension as well as with speed. Both before and after their silent reading we have a conversation period in which all participate.

A typical group of these superior children will, in five months, read from fifteen to thirty books each, progressing from primers to sixth-grade books. As a result these pupils acquire reading skills far in advance of what they would normally acquire. Scientific reading tests show that at the end of the first grade these children have advanced in reading ability from one to four grades beyond the norm. More important, these children display far more enthusiasm for reading than they would if they had to temper their speed to that of slower classmates.

#### MIDDLE GRADES AND JUNIOR HIGH SCHOOL

4. *Material for Able Readers.* Some of my sixth-graders are able to read considerably beyond the sixth-grade level. For these pupils I have developed the practice of selecting articles from two of the best daily newspapers in the country. Articles on science, industry, world and national issues, and so on are reproduced and given to these able readers. Our reading group discussions are based on these as are our study of spelling, English usage, and word meanings.

5. *Math and Number Tricks.* Some children receive a very great intellectual challenge in mathematics. In fact practically all school mathematics is of the "bread-and-butter" variety; it contains little or none of the real intellectual experience that has drawn investigating mathematicians to this fascinating field.

To a group of my more able seventh-graders I introduced some challenging mathematical tricks. It all started with the magic square. One day I put a magic square on the board and asked the children to find the missing values. This was relatively easy for them. Then I asked them to make an original magic square. They worked for a long time—adding and subtracting—but it seemed that no one could quite bring it off. Finally two of the boys, who had been working together on the problem, studied the first square and discovered that there was a definite number pattern

in it. Once they found this pattern, they were able to make their own squares. They showed the rest of the group how to do it.

That is how interest was aroused. Next I introduced them to some mathematical short cuts: like the product of  $25 \times 25$ ; or  $35 \times 35$ ; and so on. They were slow. They wondered how I could get the answer so quickly. I put a number of short-cut examples on the board and asked them to find the short cuts. The solutions were long in coming. I gave them copies of some number-trick books and other books on the explanation of number relationships. They found these fascinating as they searched them until they had quite a collection of short cuts.

We found examples that had interesting number patterns: like  $11 \times 11$  ( $= 121$ );  $111 \times 111$  ( $= 12,321$ );  $1,111 \times 1,111$  ( $= 1,234,321$ ).

As a last step we took up the brain-teasers. For example: Place numbers in such a way that they equal a particular total—employ 8's in such a manner that the result equals 1,000:

8  
8  
8  
88  
888  
  
1,000

Now that we have gathered a lot of material, we are planning to put it into booklet form. We haven't exhausted the field, but the children have been introduced to some of the startling and original sentences that can be composed from this very fundamental kind of language—mathematics.

**6. Individual Assignments.** In our social-studies classes two assignments are made. The teacher usually writes the minimum assignment on the board. This is headed "What We Must Do." Then each pupil who wishes writes some proposal under the heading "What We May Do" and signs his name. This indicates that the pupil would like to undertake an additional assignment after the minimum is completed. These extra assignments may include such activities as these: Look up a related topic in a reference or supplementary book; work on a lantern slide to illustrate some phase of the lesson; work on a poster or frieze; continue work

on notebooks; do some map work; arrange an exhibit of specimens and materials relative to the lesson; or make some freehand drawings to illustrate the material. Often groups of pupils agree beforehand to work on these together.

7. *Planning for Individual Differences.* In planning units of work for any group in school, we always plan the work in such a way that different levels of ability are required. Then we see that the work is so distributed that the difficult falls to the more able. This can be done without pointing out that one pupil is weak and another strong. For example in a science unit on rocks and stones we make available all the books on the subject from first-grade to high-school level. Various assignments are made with particular care that the able are given work that will tax their ability. While the less able may be asked merely to list rocks or report how they are formed, the more able may be tabulating, classifying, and collecting rocks, locating mines, and determining values of precious stones. A superior student can go into the subject of coloring, facets, reflected light, judging of precious stones, and how to identify paste jewels, or can read famous jewel stories.

#### JUNIOR AND SENIOR HIGH SCHOOL

8. *Faculty Committee for Able Students.* We have a faculty committee the responsibility of which is to provide enriched experiences and more challenging activities for the highly capable students in our high school. Those pupils whose I.Q.'s are above 120 are quite selected for this additional treatment. Each faculty member chooses twelve or fifteen such pupils from among the group (usually those he already knows or is especially interested in). The faculty committee meets often to discuss what members are doing, to plan group experiences, and to exchange ideas on how to handle exceptionally capable pupils.

Most of the work done by members of the faculty committee with these superior pupils is through individual conferences. A good beginning is often a discussion of the results of numerous aptitude tests. From this beginning a student may be led to talk about his ambitions and interests. Various projects may grow from this beginning. Frequently the faculty member may confer with other teachers of a given pupil regard-

ing the latter's special qualifications and with them work out a program that the pupil may undertake in connection with his regular classwork.

**9. Senior Seminar.** Fifteen to twenty exceptionally able students from the several senior-class sections were selected at the beginning of the year by I.Q. and teacher judgment to meet together for three two-hour periods per week. The guidance director took major responsibility for this group. Discussions during group meetings led in any direction in which the interests of these highly able students could be led. The work, between group meetings, was highly individualized, and organization was kept highly flexible so that students, singly or in partnership, could investigate any problem which seemed worthy of their talents, drawing upon the resources of any teacher or facility of the high school for help as needed. Group meetings were seminars in which results of individual study were shared and critically appraised and further studies were planned.

Such an arrangement has been found highly successful for permitting able students to go far beyond the accomplishments of the "average" class. It is a method for cutting across subject-matter lines in the high school to attack significant problems. When extended to students of other than the senior class, this practice gains some of the advantages of homogeneous grouping without the disadvantages.

#### SENIOR HIGH SCHOOL

**10. Scholarship Classes.** In both English and history we have organized a three-year sequence for students of exceptional ability in these fields. An English student whose work is of exceedingly high standard may enter this class at any time from the tenth grade on and enjoy the advantages of a course planned to challenge his special abilities. A wide range of reading is undertaken of both modern and classical literary works, stimulating round-table discussion of these works; there is also a great deal of critical and creative writing.

A history student of exceptional ability may like to work with a group of exceptional history students. There is great individuality in the studies undertaken by the members of the class, but the great diversity of interests—ancient history, Chinese history, modern history, Medieval France and Italy—makes it possible for the class discussions to synthesize trends,

compare epochs, and draw conclusions based upon a great amount of historical evidence.

Second-, third-, and fourth-year students generally work together in both the English and the history groups. Because of the great demands made upon students, rarely is any one student allowed to elect both of these scholarship classes.

11. *Radio Course Before School.* Several of our boys became interested in radio theory and practices as an outgrowth of our study of electronics in physics classes. Since there was no room in their schedules for a course in radio, a special course was organized and held for an hour before school each morning. Rigorous requirements were maintained; it was no practical-arts course but actually an advanced physics course requiring exceptional mechanical and intellectual ability. Lectures and discussion were supplemented by much reading on the outside in the field of radio engineering and by a great deal of actual construction of radio units.

12. *Communications Club.* Students who are talented and especially interested in the field of radio and electronics receive additional opportunities to explore these fields in the Communications Club. Members plan, design, and build small units such as receivers, amplifiers, and playbacks. The entire activity of the club is in the hands of its members. They make up lists of materials needed, plan how they are to be used, bring in designs of original circuits, and build their own units. Often the separate projects of different pupils involve a single larger job, so that small units are worked out by individuals and then assembled in a complete instrument. Also the club meets for code-practice sessions using the radio code kit suggested by the Army Signal Corps.

13. *Vocational Biology.* Our Biology Club has as its principal purpose to lead pupils into possible future vocations and avocations related to the field of biology. It is primarily for those who are exceptionally talented in biological science. Those who are interested enter the club on their own, and others who show talent in science-work are encouraged to enter it.

Regular meetings are held twice a month, but small groups or individual members of the club may work in the laboratory any day after school. Problems the members undertake include the fields of microscopy,

dissection, bacteriology, nutrition, heredity, nature study, tropical-fish culture, and hydroponics. They design their own experiments (requesting whatever help they may need), secure and set up their own equipment, and follow through to tentative conclusions on their own. Reports of results are given in the regular meetings of the club.

14. *Accelerated Science.* Students who show exceptional ability in science during their first term in the high school and who have a reading ability above average are permitted to cover the work of general science and biology in a year and a half instead of the customary two years. Those who are allowed to elect this course are placed in a science class by themselves. The time saved may be used in a number of very useful ways. The student may elect a more extensive club-activity program than he would otherwise be able to do; or he may enter a more advanced science class at the end of the year and a half and by the time he has reached his senior year undertake a special project in science or elect a science course beyond the usual high-school level; or he may select an additional one of the many subjects in our curriculum which are exploratory in nature—such as art, music, and shop.

15. *Chemistry Lab.* Each pupil works at his own rate of speed while performing experiments in my chemistry laboratory. The laboratory assignments are posted on the blackboard. When a pupil finishes experiment No. 1 he immediately proceeds to experiment No. 2, and so on. After one week of labwork I may have four or five experiments in operation during a single lab period. This makes the operation of the laboratory more difficult, but it places more responsibility upon the pupil.

Experiments are graded, recorded in my record book, and returned to the pupil at the end of the grading period. The more skillful students are not limited to one experiment per lab period but may perform two complete experiments in one day if they can. They also perform far more than the minimum number of experiments required of the class as a whole. Some of them undertake work that is relatively quite advanced. Slow pupils have fewer accidents because they do not have to adjust to the speed of the more adept pupils.

16. *College Chemistry in High School.* We offer an advanced course in general chemistry intended primarily for seniors who intend to enter

the field of chemistry or chemical engineering. Such students are identified by their performance and interests throughout high school. The course covers the same materials and the same laboratory experiments as are covered in a general chemistry course in a top-flight college. By arrangement with a number of colleges to which our graduates go, those students who successfully complete this course and attain a satisfactory score on the Cooperative Chemistry Test for College Students are able to start with second-year chemistry during their first year in college.

17. *Individual Science Problems.* Senior-high-school students work on science problems of their own choosing, either in the school laboratories at the end of the day or at home. Weeks and even months are spent on some problems. The students come to the teacher for advice, help in finding references, and aid in interpreting theories. When the project is completed it is presented to the class by the student who then conducts a discussion of the principles involved, the difficulties encountered, and the lessons learned. The members of the class may criticize the project. Questions are encouraged. One boy became interested in the Wilson cloud chamber. He read until he understood the purpose of the chamber, then tried many ways of making one until he had a good working model.

18. *Combining English and Art.* Our combined English and art class has been very successful for several years. The members of this class are specially selected students of high general ability and exceptional special ability in either English or art or both. The class meets daily in a double period—the last two periods in the afternoon—and members receive credit for both English and art. The afternoon meeting enables us to continue our activities without worrying about the stringencies and complications of the typical high-school schedule. Very frequently the group begins a discussion, or a project, or individual work during the regular double period and continues on into the afternoon after regular classes have let out. For the kind of work they do this continuity is very necessary.

The group is largely concerned with original work. They do dramatizations mostly, although occasionally they produce illustrated volumes of verse, short stories, and other original writings. The latter are reproduced by the silk-screen method or block printing and sometimes, in very limited editions, illustrated by hand. Dramatizations are especially desirable, however, because they usually involve much reading in the fields of lit-

erature and history. Those gifted in writing prepare the scripts; those gifted in art sketch the setting and prepare the scenery. Members of the group work out the action and take the various parts. Other members of the group do research into costume history, dramatic methods, or read in the field of literature for pieces suitable for dramatic adaptation.

The value of such a class as this is that a group of especially gifted students is able to pursue the fields of English composition and literature and art to a degree far more challenging than is possible in the usual classes offered in these subjects.

19. *Mathematics Club.* A senior-high-school mathematics teacher organized a mathematics club the membership of which is selected in the following way: On Monday of each week a problem in mathematics is posted in the class. This problem is based upon principles the class has been studying but requires advanced application of these principles and considerable creative thinking with mathematical concepts. Pupils who undertake to solve the problem have until the following Friday to do so, using whatever help they can get. Successful solution of this advanced problem for three weeks in a row establishes membership in the Mathematics Club. Membership is lost when the pupil fails to solve one of the problems during an ensuing week. Meetings of the club once a month are devoted to interesting highlights of mathematics history, unusual facets of mathematics, descriptions and illustrations of how mathematicians do their research, and so on.

## Practice 18: STUDY TECHNIQUES

*Teaching Techniques of Study, Research, and Library Investigation to Develop Habits of Economy in Use of Materials and Time*

*Use This Practice to . . .*

- a.* Do a better and more effective job of teaching the basic skills and the basic fields of knowledge.

A GREAT deal, if not most, of a pupil's life in school is spent in studying. At least studying is what we expect of him. The ability to study effectively is an important one in later life. A better citizen is one who has a knowledge of reliable sources of information, who knows how to get at the vast mine of information which modern civilization has collected in its libraries, and who is able to use the fruits of study in making sound decisions.

Studying is an important skill, then. And yet not until recently have schools done much about teaching pupils how to study. Schools have consistently required pupils to be expert at study skills and study habits if they are to be successful in schoolwork. Yet they have been so jealous of the time devoted to *what* we study that they have neglected taking time out for *how* we study. Oddly, the idea seems to have been prevalent that people are born knowing how to study.

*Studying is a form of reading.* It is reading to get the main idea and reading for details. There are reading tests that diagnose both these abilities. There are some exercises at the elementary level which attempt to train pupils to do these two kinds of reading better. But for the most part methods of developing competence in studying still depend upon the ingenious teacher.

*Most pupils have to be taught how to study any new subject* if they are to succeed in it from the beginning. Is it history, geography, science in the elementary school? Is it English literature, algebra, physics in the high school? Whatever it is, the reasonable things for a teacher to do, and the most efficient, are (1) find out how well the pupils know how to approach the subject to learn what is in it; (2) take enough time at the beginning to help pupils who do not know just how they should go about attacking the subject. And from time to time it will probably be necessary to have a number of refresher sessions on how to study the subject in question.

This means that every subject teacher is a reading teacher. Have you ever heard a high-school or college teacher say: "They don't teach them to read any more; pupils can't even take a physics book and find out what is in it." This is an odd attitude to take. Modern-language teachers offer courses like *scientific German* and *scientific French* so that students may learn the special techniques of scientific reading in those languages. But a physics or chemistry teacher seldom thinks of the need of a course like *scientific English*. Yet the need is just as great. In elementary school, in high school, better teachers take the time to teach pupils how to read and study the subjects they teach.

*The library holds the greatest collection of tools for study.* These are the card catalogue, the guides and indexes, the specialized reference books, the encyclopedias and dictionaries. The librarian can be a keeper of books or the most important "how-to-study" teacher in the school. The library can be a place to go two periods a week to leaf through magazines and books or it can be a place where pupils learn the techniques of unlocking new doors of knowledge. Better schools and teachers use libraries—and also room-libraries—as how-to-study laboratories.

*There are good study habits*—getting to work right away, keeping at it, taking legible and useful notes, mentally organizing the material, budgeting time, and so on. With good students these habits may seem like second nature. Nevertheless they *are* learned.

*A school-wide program* is probably the best method of keeping at the difficult problem of teaching pupils how to study. Some schools tie such a program up with their remedial-reading program. Others make it a part of their regular testing program. Still others organize how-to-study classes. At any rate the need for teaching study techniques has to be kept before teachers through faculty discussions, special bulletins, and other ways of

drawing attention to the problem. The teacher—who is a good student usually—finds it difficult to believe that others (unless they are lazy or stupid) could not, if they tried, find studying as easy as he.

### SAMPLE PRACTICES

The sample practices are listed under the following headings:

1. Elementary Grades
2. Middle Grades and Junior and Senior High School
3. Junior and Senior High School

#### ELEMENTARY GRADES

1. *Getting Answers.* During reading instruction in my elementary classes I attempt to make some of the basic approaches to study techniques. For this purpose I use questions which are progressive in difficulty. The first type of question is one which is very direct and for which the answers are easily found. As the children progress the questions are not so direct and the answers are not found so easily. Some children need a great deal of help in finding answers that are not given in one sentence in the book. I use not only my own questions but try to use questions the children raise. These are likely to be the most difficult of all to find the answers for. When the children desire information not readily available in one book, I bring in the use of tables of contents and indexes; show them how to find a topic quickly by using paragraph headings. (It is not uncommon to find a child beginning from the first word of the first page of a given reference.) I point out that the answer to a question may not be where they think it is—that they need to use more than one probable topic when searching in an index. I expand this method of teaching study techniques as we take up books in the fields of science, history, and geography.

2. *Study Guide.* Pupils in middle grades have often been given detached lists of words to look up, in the hope of increasing their vocabularies. This practice seems almost aimless. Instead of lists of words, questions which link word to context are more effective. *Examples:* (The underlining of a word is a clue that looking for the word in a dictionary will be helpful.) (a) What is the pommel of a saddle? Find on page 284

## REASONS WHY

### PSYCHOLOGY SAYS:

1. If you want a certain result, teach it directly. Your pupils may know how to study to your satisfaction. But if they don't you will have to teach them. They are not born with the skills you want them to have; nor can we always depend upon other teachers to teach pupils to our satisfaction. The most efficient thing to do when pupils don't know something you think they should know is teach it to them.

2. Individuals differ in all sorts of ways. (See Reason 1, Practice 2.) No school can be thought of as efficient that does not take time to teach pupils those skills that are basic to its whole process.

### SOCIETY SAYS:

3. Free access to the facts and free discussion are basic to democratic society. Free access to the facts depends upon one's ability to know where to get and how to secure information.

## SAMPLE PRACTICES (Continued)

what Tom had fastened to the pommel of his saddle. (b) What does bumptious mean? On page 285 find out who was bumptious. (c) On page 277 we read that the kangaroo family moved with tranquil undulations. What are undulations? What kind of undulations are tranquil undulations? (d) What color is tawny? On page 241 what tawny creatures are mentioned?

**3. Audience Reading.** One morning a week for approximately twenty or twenty-five minutes we have an oral audience reading period. Each child has an opportunity to read aloud about twice a year during this period. He reads a selection that correlates with our reading units or one that he particularly desires to read. We prepare for these periods by compiling a list of desirable reading practices for such an oral reading situation. Also we prepare a list of desirable listening habits for the audience. After each child has read we check ourselves against these lists to see in what ways we can improve. After each child has selected a reading (either by himself or with the teacher's aid) he prepares a study paper for his story which includes the title of his story, the words he does not know, and a question to which he is going to ask his audience to learn the answer. He then reads his story to the teacher during free school time or after school, so as to obtain any help he may need before he is placed in the audience reading situation.

## MIDDLE GRADES AND JUNIOR AND SENIOR HIGH SCHOOL

**4. Study Diagnosis.** Whenever I get a new class of pupils I like to find out about each one's ability to do independent study. I therefore assign a short topic that can be mastered through a use of materials available to every pupil. I note such study habits as ability to get to work immediately, continuousness of application, and speed of accomplishment. I note the quality and conciseness of the work turned in. On the basis of these observations I divide the class into groups for instruction in how to study.

**5. Improving Work Habits.** I have made a careful study of Richard's records from past years, have examined the results of his tests, and have

studied him carefully this year. I find that his main trouble is "poor work habits." He is a child of normal intelligence and able to progress much more rapidly than he has in the past. I talked the matter over with him, and we agreed that I should keep a card every day and make a check every time I caught him showing some poor work habit—daydreaming, not getting started right away, failing to have paper and pencil or other materials to work with, wasting time when looking for material in the room-library, talking with his neighbor when both should be working on something, and so on. At first I checked many of these on his card every day, and he was startled at the number of times he had exhibited a poor work habit. Each day the number of times he has shown poor work habits has decreased. He begins to realize his trouble and is trying very hard to show improvement. How long I shall have to do this before he becomes a conscientious worker on his own I cannot say; but I am making a record of our little experiment on his record card for the information of his next teacher.

**6. Patterning Facts.** One of the important study techniques is the ability to organize facts and ideas. To teach pupils to organize ideas I use a scrambled list of facts and ideas relating to the topic we are studying. Early in our study of the topic this list is placed on a part of the board and reserved. The statements are completely unrelated as to their order of placement. A part of the pupil's job in securing information on the topic we are studying is to reorganize this material in its logical order. As pupils gain knowledge on the topic they are able to look at the scrambled list of facts and ideas with a more critical eye. The more able pupils are usually the ones who first see through to the proper arrangement. When a pupil thinks he has the key he makes his own listing on a piece of paper and turns it in. If it is not quite successful I tell him so. He always has the choice of letting it stand as his best try, if he is not successful in developing any greater insight before the close of the unit.

**7. Correcting by Conference.** I use the conference method of correcting English compositions. Instead of handing a blue-penciled paper back to a student I schedule a time during which the student and I talk over the good and bad points of his work. This is usually accomplished during periods of class study or when the class goes to the library, although I also use the study hall for those students who are in my study-hall period.

We discuss the beginning and ending sentences, the logical order of statements, punctuation, spelling, etc. Then the student takes the paper we have marked together and makes a second draft. This takes more time, but it gets better results in terms of a student's improvement.

8. *Open-book Tests.* We call them "Open-book Tests." Questions are asked orally or written. Answers are found by reading printed material, maps, or graphs. The type of answers varies: (a) Underline a word or phrase which answers the question (when supplementary magazines are used). (b) Write the word or phrase. (c) Write the answer in a complete sentence. The questions are intended to call for most of the kinds of things students need to do well in studying.

#### JUNIOR AND SENIOR HIGH SCHOOL

9. *Study Program.* A short course on how to study was organized for high-school freshmen who were planning to enter the college-preparatory course. Students need considerable assistance in planning their daily routine and in effectively completing independent work. The first topic covered schedule-planning. The importance of scheduling one's time was discussed and, as practice in the art of scheduling, each student drew up for himself a plan whereby he allowed himself time for recreation, home chores, and study. Each student discussed this plan with his teachers and then with his parents. After changes were made his parents approved the plan in writing and agreed to do their part to help the youngster carry it out. The plan was then prepared in triplicate—the student kept a copy and gave a copy to his parents, and a copy was placed on file with the instructor of the course. Sometimes merely the attaching of importance to a process like schedule-planning is all that is necessary to induce a student to improve his efficiency by following a schedule.

The second half of the short course covered preparing assignments. In a preliminary discussion of this topic the instructor pointed out the different techniques of reading and their uses. Special attention was paid to the difference between skimming, reading to get the main thought, and reading to get the details. By way of practice a regular assignment in some subject for that day was chosen. Students were asked to skim the assignment; this was followed by a discussion of the value of headings and subheadings in skimming. Next practice in reading for the main

thought was undertaken on an assignment. The process of discovering the main thought was discovered to be more difficult. The test of its successful accomplishment was discovered to be whether a student could put into his own words the handful of major ideas brought out in the passage. The final practice, to read for details, was found to be easier when the main thought had been discovered. A discussion of rates of reading and methods of improving reading speed concluded the short course. A number of popular texts and treatises on the subject were referred to in covering this topic.

Although this practice was undertaken as a special short course, it would probably also be most effective at the early stages of any high-school course, when the teacher of course could use a week or two in this fashion to good advantage.

10. *Reading in Junior High School.* Ours is a reading-adjustment program in the junior high school. It is not only intended to improve those who come up from the elementary school reading at a level below their grade but also to raise the ability of all pupils regardless of their standing. Such a program is advisable because of the increased importance of reading in the expanded curriculum of the high school. Much dependence upon textbook materials and a more mature and difficult subject matter require that each pupil achieve his highest possible potential in the art of reading.

We have made reading instruction an integral part of every course in the junior high school. The special reading skills required in the study of specific subjects (science, social studies, mathematics) are developed in the classes in those subjects. Each subject teacher is expected to spend as much time as is necessary in teaching pupils the specific reading and study skills required in that subject. For this purpose these teachers hold frequent meetings with the reading specialist who assists them with the teaching skills involved, suggesting appropriate activities and materials which may be used. In the ninth grade students who are still at the remedial level (one grade or more behind in reading ability) are grouped together for English. As a result of this program it has been possible to eliminate most of the "remedial cases" by the time they are ready to enter senior high school. Furthermore all students, no matter how well they may read, have shown themselves capable of improvement.

11. *Using the Readers' Guide.* To encourage pupils of my eighth grade to learn to use the *Readers' Guide to Periodical Literature*, we first spent some time in the class talking about topics in which each pupil was interested. Some liked horses, some were interested in newspapers, others talked about dogs, hunting, jet-propulsion, and so on. We listed all of these on the board. Each pupil then took a topic and agreed to find out what material had been printed in periodicals about his favorite topic. Pupils were astonished to find out just how much material was available on their particular interests and even went to the town library to locate and read magazines which were not available in the school library.

12. *Library Laboratory.* Each pupil (Grades 7, 8, 9) studies in English class the material on the use of the library that is in his English textbook and then comes to the library for two periods of laboratory work. The first is a laboratory period in which he is asked to bring certain books to his English teacher. For example: Get a book written by Albert Payson Terhune. Get a dog story. Get a book called *So You're Going to Get a Puppy*. A spirit of competition usually arises among pupils to see who can get the most books. To challenge the more able pupils a file of more difficult assignments is kept for the ones who have successfully found five books. These are marked with a red star. This is a noisy but very effective method of making the pupil skillful in helping himself. Pupils who need extra help are easily detected by the English teacher's record of the books he has found.

13. *Library Talk.* After term papers have been assigned the librarian goes to each social-studies classroom to give general information about sources of material for bringing the references on the topic up to date. Consideration is given to encyclopedias, yearbooks, general reference books, catalogues, and the *Readers' Guide to Periodical Literature*. Sample sheets of the *Readers' Guide* can be secured free from H. W. Wilson Company for the purpose. This instruction is actively motivated by the assignment, and the skills taught must be used immediately.

14. *Library Unit.* As a unit in sophomore English each pupil studies the use of the library. This unit is taught in the library by the librarian rather than by the English teacher in the classroom. The students are first shown the location of various classes of books and the aids that they must

know. References and other tools of the library are discussed and the student is given an opportunity to handle them and study them. At the conclusion of the unit questions like those students frequently ask the librarian are given to the students to answer, using the reference materials discussed. An attempt is made to give questions that will interest the group: questions on sports, machines, hunting, etc.

15. *How-to-study book.* We made a project of studying how to study. We listed the studying techniques drawn from (a) vocabulary enlargement, (b) use of dictionary, (c) use of encyclopedia, (d) skimming, (e) locating material, (f) getting general significance, (g) organizing materials, (h) following directions, (i) reading to predict outcomes, (j) reading to note details, (k) forming sensory impressions, (l) reading to criticize, (m) reading graphic material, maps, tables, etc., (n) reading to isolate thoughts, (o) using table of contents, glossary, index, schedule, timetable, etc., (p) changing rate of reading for kind of reading being done. These were the general contents or chapter headings of a book which the class prepared. In the book each technique was discussed as to function, value, instances in which it is appropriate, etc., and was followed by a collection of procedures and devices that have been successfully used for this technique. Blank pages were included for adding new ideas as pupils discover or try them.

## Practice 19: COORDINATION WITH THE HOME

*Coordinating the Efforts of the Home and the School in Promoting the Successful Development of Pupils*

*Use This Practice to . . .*

- d.* Develop desirable character and personality in pupils.
- e.* Develop good citizenship.
- f.* Develop attitudes and habits of good health and safety.
- g.* Use the full resources of community and staff in planning the program of public education.

THERE are at least two important educational institutions. One of these is the school, of course. The other is the home. Which is of greater importance it would be difficult to say. Certainly any youngster learns more at home than he will ever learn in school. Certainly what happens at home can influence very directly and very significantly what he learns in school. So whatever the school attempts to do it can hardly, with effectiveness, do it all by itself. This is one-cylinder education. If the school is to do a great deal in the fields of character-, personality-, and citizenship-development; if it is going to work on attitudes and habits; if it is going to make the most of parent insights (wherever parents have good ones), and help parents in rearing children (wherever parents need help)—if the school is going to do these highly important things, then it is bound to coordinate its work with that of the home.

*Parents often have insights that are invaluable to the teacher in working with individual pupils.* A child's physical condition, his home interests, his neighborhood friendships, his behavior at home—there is much that a teacher needs to know if he is going to do a good job. Many of the teacher's problems in dealing with pupils can be simplified through joint teacher-parent action—if the parent is drawn into the discussion of the problem and his help solicited in a friendly manner. It may be a wise parent who knows his own child, but the parent is in a better position to know a pupil than any other one person.

*Parents are teachers.* Much of what the school initiates parents must be depended upon to follow up, if the results are to be lasting. Not only dental and physical remedial work, but seeing that pupils get necessary experiences—trips, suitable books and magazines to read, worthwhile toys, proper materials and facilities at home to develop interests and abilities, home duties and responsibilities, allowances to learn money-management, and many other things. All of these come under the heading of services that parent, rather than school, may or must provide, if the work of the school is to be augmented as it should be.

Parents must also understand what school and teacher are trying to do. Parent-teacher meetings, individual conferences, report cards, and notes to the home are all devices related to this purpose. It does little good to devise a new reporting system with which the teachers may be well pleased if the parents do not understand it. The primary purpose of a report card is to inform the parent and to lead him by this means to do all that he can possibly do to supplement the school's work. A report that tries to do more may end up by doing nothing.

*Parents (together with other laymen) are a source for augmenting school services.* The number of motion-picture projectors, books, films, and other materials and equipment which parents and their organizations have supplied to schools would total up to a tremendous figure. Parents, of all laymen, are probably the most personally interested in seeing the school improve. To this end, in many communities, they have undertaken what amounts to a great deal of informal and voluntary taxation to supply the school far beyond what the official budget calls for. This kind of interest can be aroused in most communities, and the parents can be made to feel that they are getting value received for their supplementary donations.

The services that parents have supplied in many schools would also

amount to a pretty figure if the school had had to pay for them. Parents are librarians, trip-arrangers, transporters, club sponsors, and chaperones, and their groups also have been found extremely valuable in studying and organizing for better effect many informal educational influences such as radio and movies. In fact most good schools not only vigorously promote the assistance of parents and parent groups but welcome the continual presence of parents in the school.

### SAMPLE PRACTICES

The practices in this section appear under the following headings:

1. All Age Levels
2. Limited Age Range

#### ALL AGE LEVELS

1. *Orientation Booklet.* Two kinds of orientation booklet are used in our junior high school. Both are prepared by students. One booklet is for the parents of prospective new pupils and contains what the students in the school feel the parents should know about the school. It includes information on courses of study and their purposes, notes on student organizations and activities, schedules, floor plans, and an invitation to visit the school. It describes the general visiting day for new pupils and their parents which is held in advance of the opening day of each new term.

The other booklet is issued to parents whenever they come to the school to visit. It contains general information about the school and its objectives as well as a directory of the school—teachers, room numbers, and classes.

2. *Welcoming New Parents.* A committee of our parent-teacher organization has been formed for the purpose of welcoming new people into our community. When a new family moves to town the committee is apprised of it through its numerous individual contacts. Two members of the committee (usually a teacher and a parent) are then assigned to call upon the new family, give parents helpful information about the community and about the school, and inquire about their children. They are informed also of the services performed by other committees of the

## REASONS WHY

### PSYCHOLOGY SAYS:

1. Children develop in terms of all the influences which affect them. Not only the 180 days of school but the 365 days of living in school, home, and community go to make a person what he becomes. If all these influences are not harnessed together toward the same ends the result is a splitting of effort.

2. It has been said that a person learns more in the first three years of his life than in all the years afterward. However this may be it is certain that the early home life is vastly important. Accordingly, to improve its effectiveness the school must do what it can to improve the educational setting of the home.

3. Individuals differ in all sorts of ways. They differ, partly, in terms of their home environments. No teacher can thoroughly understand a pupil if he doesn't know the kind of home environment in which he has been brought up.

### SOCIETY SAYS:

4. Public education is a cooperative enterprise. The more co-operative the enterprise, the better the school. The close cooperation of parents and teaching staff is necessary if the school is to realize a full return on society's investment.

5. The school should make up for the work of those agencies of informal education that have become less effective in modern society. Schools were first held in the home. Since those days the character of the home has changed enormously. Still, through cooperation of school and home in an educational process that is now much more complex, both school and home may have far greater influence for good than either can unassisted.

## SAMPLE PRACTICES (Continued)

parent-teacher organization and are invited to work with the one which interests them most. They are directed to a subcommittee of mothers familiar with the community who undertake, upon request, to advise them on any points they care to raise, such as places to shop, churches, clubs, domestic help, and transportation.

When the children come to school for the first time, the two members greet them, see that they are properly enrolled, and introduce them to their teachers. Later on at luncheons or teas, which are frequently held for parents, these committee members act as special hostesses, introducing the newcomers and making them feel at home.

3. *Annual Letter to Parents.* Near the end of the school year we write an annual letter to parents, summarizing their child's achievements for the year and his particular problems and needs as we see them. The letter is sent with a return form enclosed. On this return form parents are asked to reply to such questions as: "What observation of your child in his home have you made that might be useful for us to know about?" "What reaction to school have you observed which might be significant to us?" At the bottom of the return form is the notation to parents: "We feel that personal conferences with parents often fill a need that written reports can't fill. Therefore you may be asked to come to school from time to time for such conferences. Please feel free to ask for additional conferences to discuss any problem you may have. After all, the education of your child is a very important matter on which home and school should collaborate."

4. *Visiting.* I make many visits to meet the parents of my children and have found this is a very important function of the teacher. Visits have opened my eyes to special needs of children that I would never have recognized in any other way, and they have also opened the eyes of parents to the fact that the school needs their assistance. For example on one of my visits a mother decided to give up her remunerative work outside the home in order to devote most of her time to her children. She realized from our discussion that her son's lack of punctuality and her daughter's difficulties in schoolwork could be traced to a lack of parental interest and attention.

**5. Visiting Teacher.** One of the most important points of contact between the school and the home is the visiting teacher, attendance officer, visiting nurse, or other similar professional employee. No matter what the primary purpose of the job, much can be done regarding inspecting of homes, informing teachers on home conditions of children, observing home health and feeding, getting insights into parental attitudes and causes for children's attitudes toward parents and teachers.

The work of such a professional is especially enhanced when the teaching staff works closely with him, as ours does. Our visiting nurse, for example, often visits broken homes or those about to become so. Whenever it seems possible she tries to reunite parents because of the needs of the children. When parents have already separated she refers the mother to agencies that can help her obtain support of the children from the father. If homes are disrupted because parents are in institutions, she tries to help the remaining parties by referring them to relief agencies or using other means to keep the family a unit until the missing member returns. In cases where children are living with foster parents, she makes frequent home visits to see whether the new home is a healthful, happy environment. She observes children in the home environment on all her calls to see whether they exhibit signs of nervousness that might result from neglect or feelings of rejection. Cases that involve particular teachers are made the basis for careful discussion between the visiting nurse and the teacher and the planning of specific ways in which the classroom situation can be used to compensate the home situation.

**6. Home-visitor Conferences.** Two weeks before report cards all teachers hand to the home-visitor a list of students who are doing poor work. The home-visitor confers with the pupils in the hope of finding out the difficulties and ferreting out conditions which might be contributing to this poor work. After the report cards are given out the visitor goes to the homes and discusses the situation with the parents.

**7. Parent Conferences vs. Report Cards.** Conferences are held with each parent at least twice a year. These conferences have entirely supplanted report cards in our school. We find them to be much more satisfactory in accomplishing what reporting to parents is intended to accomplish—informing the parent on his child's development and securing the assistance of the parent in fostering this development. In addition

we learn a great deal from the parent which is of assistance to us in the school.

In discussing a child with a parent we dwell mostly on those common aspects of a child's development which both parent and teacher must work on to secure the fullest development. Topics include health habits, personal traits, friendships, study habits, and aims of the school. At the conclusion of the conference a summary is made of the discussion so that a copy may be placed in the pupil's cumulative record.

These conferences are so scheduled that they are spaced conveniently throughout the year and are not bunched all at one time as is customary with formal reporting periods. Most of our teachers have had some training in counseling parents.

8. *Notes with Reports.* Every time a report card goes home a little note, attractively mimeographed, goes with it. Usually prepared by the principal, these notes are brief, to the point, and simply written. They touch upon such things as a new school policy, help needed from parents, how parents can supplement the school program in their child's education, suggested summer and week-end activities, meanings of certain marks on the report card and how to interpret them, importance of character-development as compared with reading, writing, and arithmetic, and many other topics which over a period of time are intended to raise the expectancy of the parent regarding the work of the school.

9. *Reporting by Pupils.* Each of my pupils keeps a "home-report" folder. The contents are mounted in a little booklet periodically and taken home along with the report to the parents. The children make daily entries, each one evaluating his own work. Records of tests are kept in the folder, subjects liked or disliked are mentioned, and when improvement is needed in a subject a statement is made to that effect. This practice makes the children continually conscious of the type of work they are doing and assists in self-evaluation. Furthermore, the parents themselves enjoy receiving this kind of report and state that they gain a much better conception of the type of work children are doing.

10. *Reporting to Parents.* We use several modifications of the usual reporting system. The report card, for example, indicates the grade of achievement in which the pupil is doing satisfactory work. If a pupil of

low I.Q. is in the fifth grade but is doing satisfactory work in reading at the fourth-grade level, he is given a mark of "satisfactory" in fourth-year reading. This eliminates the feeling of discouragement that is the bane of existence for children who are not able to keep up with the others.

In the ninth grade we send a notice home to the parent if the pupil's work is not up to college certification standards. This is a special notice that goes home with the report card. We do this to warn parents who are interested in having their children attend college.

In the senior high school a printed form is sent to the parent whenever special commendation is appropriate. If the pupil has done exceptional work in his regular classwork or in extracurricular activities, or if he has given some special service to the school, a notation is made on this form.

**11. *Changing Report Cards.*** We decided this year to make some drastic changes in the very inadequate report card we were sending home. Because of our large enrollment individual letters and parent conferences seemed impractical. So we organized a committee composed of teachers selected in a faculty meeting and parents selected at a meeting of the parents' organization. This committee discussed the problem and made several drafts of possible report cards. These sample cards were sent home to all of our parents and their criticisms requested. We asked them to give us suggestions as to what they would like to know about their child's progress in school. Through this method a satisfactory report card is being developed—one which will satisfy our purposes as teachers, but also one which will be willingly received by the parents who are the principal party concerned. From the parents we have received a number of excellent suggestions.

**12. *First-aid Slips.*** Whenever a pupil has an accident at school, no matter how slight, the school nurse or person caring for the child fills out a first-aid slip that is sent home to the parent. This slip notifies the parent that the accident occurred and that first aid was given and explains the circumstances of the accident. The parent can then take any further measures that may be necessary. The parent signs the slip and returns it to the school. These slips have a stub on which the person giving first aid makes a notation as to the treatment given. This is a precautionary measure to help safeguard children from infection that may come when a wound is not properly cared for.

13. *Check on Contagion.* Whenever any contagion starts in a class a daily check is made by the school nurse on the pupils of the class. This check is made for the period of the incubation. Parents are notified that the check is being made and are told the reasons for it. A pupil who shows any signs of contagion is sent home immediately with information from the nurse as to the possible cause for the symptoms and suggestions that a doctor see the child. The child is then not readmitted to class until certification can be given by the doctor as to the child's health.

14. *Class Parent-Teacher Meetings.* Meetings of the parents of pupils of a single grade are proving very satisfactory in our school system. Problems pertaining to the particular grade are discussed and information pertaining to this specific aspect of the school program is made the predominant part of the meeting. Being in a smaller group, parents are much more willing to ask questions and the discussion is much livelier. All teachers who have classes of the grade are present. Whenever such grade meetings of parents and teachers are planned the parents are notified by post card.

15. *Parent-Teacher Discussion Groups.* For two years we have had a series of discussion groups in which parents and teachers meet in homes to discuss mutual problems. This year their topic is designed to help a teacher committee working on curriculum revision. The topic is "What is the part of the high school in family-life education?" There are sixteen different groups, each of which has ten to twenty members—parents and teachers. Some groups have held several meetings. The discussion-leaders are all parents who have had some advance preparation and discussion of the subject under consideration. These leaders use a discussion sheet which breaks the topic down into specific questions. Copies of the discussion sheet are given to all the members of the groups. Written reports of each group will be given to the curriculum committee.

This is one way in which teachers and parents may get together in a friendly atmosphere to discuss mutual problems and to create a better understanding of what the school is doing and hopes to do.

16. *Parent-Teacher School-board Liaison.* Our parent-teacher organization has a regularly elected officer whose duty it is to attend all school-board meetings and report to the association on all topics discussed there.

which they should know about. This person is very successful in bringing to the attention of the school board important problems facing the community that are of concern to parents.

17. *Informing Parents on Health.* One of the greatest problems regarding health in our school is the lack of health education on the part of parents. Many of the parents know less about the proper care of teeth, for example, than the children themselves. Most of their remarks pertaining to dentistry in the presence of their children have to do with the unpleasant aspects of dental work. This is due to the inadequate health education they received during their school years.

We try to see to it that parents learn as much about good health measures as their children do. When children study health they communicate their information to their parents through letters written in class. Also through the children we campaign for 100 per cent attendance of parents at the home and school meeting on health each year. At these meetings the school dentist discusses what he is attempting to do and what services are available to the parents. After the meeting and during the following day he holds private conferences with parents and children, showing the parents the defects in their children's teeth which dental inspection has disclosed. Other features of the home and school meeting may include a demonstration of physical-education activities, a talk on the part physical education plays in building healthy bodies, a demonstration of the use of the audiometer in discovering hearing loss, and so on.

18. *Parents' Library.* A corner of our elementary-school library is reserved for parents. There they have seating and study privileges near the shelves containing the collection of books for parents. There are books which may be used only in the library and a large collection which circulates. Our parents' organization has provided the funds for this collection and keeps it up to date at all times, often buying books which would be too expensive for most families to purchase.

19. *Art at Home.* Among the helps which our school has given parents is the use of art as an emotional outlet at home. Parents are shown how art materials may be secured for the purpose at very low cost. For example finger paint can be homemade with starch and vegetable coloring. Clay is also a good medium and may often be found in a neighboring

brook. The school has also induced local hardware and toy stores to stock appropriate materials and inform the school of their arrival, and the school then recommends them to parents.

20. *Vacation Guide*. Just before Christmas the faculty of the P.T.A. collaborated in publishing a *Vacation Guide* which was distributed to all parents. The guide listed events and exhibits of interest in local museums, theaters, stores, and churches and interesting radio programs, concerts, public parties, and celebrations which were to take place during the Christmas holidays.

21. *Vacation Reading*. Toward the close of the year I get out a little mimeographed note for parents. It is attractively done in a folder, with an illustration, to call their attention to the importance of summer reading. The intention is to keep up the interest of the children in reading over the summer so that they will not lose what they have gained. I suggest that they take advantage of the opportunity to take approved recreational reading books from the school to be kept over the summer. A child may take home books for his summer reading; a fifty-cent deposit for each book is returned when the book is brought back in September.

22. *Courtesy Inventory*. A committee of pupils, teachers, and parents held a series of meetings and formulated a courtesy inventory to be used for self-evaluation by pupils and for teacher and parent evaluation of the behavior of pupils. This document contains a series of questions relating to courtesy in the school, on the playground, on the streets, and in the community. Parents responded very favorably to the courtesy inventory and asked whether it might be extended to cover home behavior. The problem was referred to the committee working under the parent-education chairman of the parents' organization. It will develop a "home" section for the inventory, calling on a large number of parents and pupils for suggestions.

23. *Improving Home Living*. A planning committee of the parents' association met early in the summer to lay plans for a program for bettering home living. Discussing the problem of the radio, they developed a radio rationing scheme. They studied a number of children's radio programs; made contacts with local radio stations; interviewed parents and pupils.

After careful study a bulletin was produced that indicated program interests by age level, recommended listening by age level, time and date schedules of programs, and a plan for rationing radio listening among the youngsters in a home so that not all of their free time would be taken up by listening.

Another pamphlet produced contained a list of graded books and magazines for children. Data for this pamphlet were secured in much the same manner: interviewing teachers, librarians, parents, and pupils; investigating a number of titles; and reviewing the writings of experts in the field of children's literature.

Attractive individual covers for both of these publications were made by elementary-school children.

**24. Health Follow-up.** Following our regular physical and dental examinations we use a system of follow-up with parents in order to secure corrections. Corrective advice cards are sent home with each pupil found to have any defects whatsoever, no matter how small. These contain little notes of explanation stressing the importance of having cavities cared for by a dentist while they are small and before they destroy any precious tooth. These cards are signed by the family dentist when all defects mentioned have been corrected and are then returned to the school, where they become a part of the child's cumulative record.

All notifications of physical defects are mailed to parents after the physical examination. There is a place on the form to check minor defects which need correction and a place for little notes stressing the importance of each. Personal letters are enclosed or sent in regard to hearing losses, heart and gland conditions, hernias, immature development, and other specific and more serious conditions. An invitation to call the school nurse is noted on each of these forms, in case the parent wishes to discuss the condition further.

The school nurse follows up on this general plan of home notification, making a call to discuss the condition and urge its correction. All cases of potential contagion reported to the school nurse are investigated with a view to helping at home.

**25. Homeroom Mothers.** Homeroom mothers have quite a job in our school. They are our principal home-school coordinators, since we do not have the services of a visiting nurse or visiting teacher. They have a

regular schedule of visiting other parents, interpreting the school's philosophy, discussing school regulations with new parents, helping to promote 100 per cent cooperation of parents in vaccination and dental-health campaigns, acquainting parents with helpful radio programs, books, and magazines. They serve as hostesses for a "get-together tea" early in September for new parents.

26. *Parent Visits.* The average parent is in our school building at least ten times a year. It is our policy to use each occasion to promote mutual understanding between school and home. Some of the occasions that bring parents and friends into the school are ten general parent-teacher meetings each year; twenty class or group meetings; assembly programs; the shop exhibit; the home-economics exhibit; meetings of advisory committees on which parents serve; the senior play; the operetta; orchestra concerts; class exhibits; and consultation with guidance counselor or teachers. All of our services and events are publicized widely among parents so that the latter will feel free to come to the school to take advantage of anything that is going on.

27. *Extras through Parents.* We have a large and active parents' organization. Though they do not think of it in that way, this very useful group is primarily concerned with the assessment and collection of a voluntary tax which supplies funds in addition to those made available through regular tax sources. For example seventy-five families, members of the organization, are cooperating as a special committee to raise funds to purchase a refrigerator for the school cafeteria. Some of the funds raised by such activities are voluntary contributions of members of the parents' group and others; some are raised on special suppers and entertainments. One such entertainment yielded the following: two sets of encyclopedias, draperies and rugs for all classrooms, a sewing machine for the home-economics department; a stove for the lunchroom, dishes and kitchen utensils, and lumber for the school shop.

28. *Library Committee.* The Parent-Teacher Library Committee promotes the reading of good books and informs parents on what to buy for their children. Every fall during Book Week the committee conducts an exhibit. Books suitable for both elementary- and secondary-school pupils are collected from the autumn offerings of publishers and displayed in

the school library in special shelves set up for the purpose. The pupils browse among these books during and after school. The exhibit is open evenings for parents to visit. This year an exhibit of bookmaking from earliest times was put on by the industrial-arts department. Special sections of the exhibit contain books for parents and books for teachers.

Another activity sponsored by this committee is the traveling "book barrel." New, interesting, stimulating books to which attention should be attracted are placed in the book barrel. This is a circular-shaped shelving arrangement mounted on a platform with large casters. Attended by a member of the committee, this book barrel tours the classrooms and is eagerly welcomed by teachers and pupils alike.

Still another activity is the "reading-aloud service." Any mother with a sick or home-bound child may telephone and arrange for a member of the committee to read to the child as long as is desired. Books from the home or books furnished by the committee may be used. There is no charge for this service.

29. *Parent Trip-arrangers, Costume Caretakers.* The members of our parents' organization perform many services that are extremely valuable to the school and its teachers. Not the least of these are the services of the chairman of the Visual-education Committee. She suggests possible trips, calls factories, museums, and other places and makes all necessary arrangements for our visit, makes arrangements with the bus companies, and secures mothers to help teachers conduct the pupils on the trip. In short, all details in connection with the mechanics of making a trip are removed from the shoulders of the teachers. As a result of this service the number of trips which our classes have taken has increased enormously.

Another service performed by parents is the care of the costume room, where all costumes used in plays are stored. Costumes are hung on hang-ers on a large rack in a storage room. Parents keep the room in order; they donate costumes and clean and mend them. Teachers find the costume room of great help in staging impromptu dramatizations.

A committee of parents has catalogued all recordings owned by the school. They have made individual folders for each record and have stored them in an open rack in the school library where they are imme-diately available.

In one of the first grades parents cooperated in cataloguing pictures and keying them to words in the basic vocabulary list.

30. *Parent-sponsored Entertainments.* Our parents' organization each year provides at least one interesting program for the children. A distinct service is performed, for a new phase of knowledge is usually opened up by these programs, which are no burden at all upon the teachers.

One year a man who had lived in Alaska gave an excellent talk on that territory, illustrated with color movies which he had taken himself. At another time a similar program was put on by a person who had lived in Mexico, who also exhibited examples of Mexican craftwork. Other treats were an illustrated talk on Holland and a Latin-American musical program given by another traveler and his assistants.

31. *Study of Homes.* An insight into home conditions is very important to teachers, but it is not always easy to secure. When a child has been absent for more than two days, our visiting nurse visits the home. The primary purpose is to learn whether the child's absence is due to illness, whether there is anything she can do, and whether the child, if ill, is getting the proper care. The subsidiary purpose of this visit is to secure information on the home: size of quarters, cleanliness, number of children, attitude of parents, etc. These facts are noted on a form which is kept in the nurse's possession, but the information is used in discussions with teachers, guidance counselors, and school administrators.

#### LIMITED AGE RANGE

32. *Demonstration Nursery School.* Our nursery school is not operated as a service for parents who want their children taken care of. In order to register a child a parent must agree to spend five consecutive school days observing at the nursery. Mimeographed guides are prepared for this period of observation. Regular monthly meetings of nursery-school parents are held for discussion with the school psychologist, the nursery-school teacher, and review of books on child growth and development.

A nutrition fee of \$12 per month per child provides a noon meal and morning and afternoon lunches. Parents furnish transportation. Only twenty-four are enrolled, but the waiting list is three times this long.

33. *Summer Activities.* At the end of the first school year I send home mimeographed letters to the parents with suggestions which will aid the children to retain much which has been initiated in the first grade. I suggest trips to the public library and the borrowing of books at the primer level; the reading of the workbooks already explained and completed at school; and frequent review of the alphabet and writing of names and numbers.

34. *First-grade Party.* Every year my first-graders entertain their mothers with a program of regular school activities, songs, dramatizations, and rhythm-band numbers. This program, managed by the children themselves, is followed by a tea. The children sometimes bake cookies to serve, at other times make jelly to serve on crackers. When a parent arrives, she is met by her own child, who acts as her host, introducing her to the teacher and to other mothers, explaining various activities in the room, and finding her a comfortable seat. After the entertainment the children serve the refreshments themselves.

35. *Home Spelling Tests.* Whenever I have a spelling test in school I have one of the pupil's parents test him on the same list at home the evening before. The spelling list is sent home with the pupil with a little written request that the parent call the words for him. The test is corrected and signed by the parent. I find this keeps the parents aware of what his child can do in spelling and makes the pupil feel a little more responsibility for preparing for the test.

36. *Parents Visit Culminations of Units.* When a unit is being drawn to a close many interesting things are usually going on. A mural has been completed and is ready to be explained. A dramatization is being put on with live actors, puppets, or homemade "movies." Booklets, craftwork, or other materials are on display.

For these occasions we follow regularly a practice of inviting parents to come to the class to see and understand more fully what we are doing in the school. We usually advertise events of this sort in the little mimeographed bulletin sent home weekly, giving date, time, room, teacher, class, and what is going to happen.

Just recently a number of parents were in to hear a third-grade class

give reports on the topic "Our Clothes—How They Are Made and Where the Materials Come From"; to see a fourth grade put on a puppet show of animals and birds and scenery of Africa; to hear a first grade dramatize what they had learned about farms. At the end of each of these presentations the parents met for a short discussion with the teacher or principal who interpreted the educational values of what they had seen.

37. *Interpreting the Testing Program.* Parents were invited to participate in scoring achievement tests currently being administered in the fourth grades as a part of the city-wide testing program. The purpose was to familiarize parents with one of the several measures used in our guidance program. The teacher in charge of the testing program explained the uses of intelligence and achievement tests for elementary pupils. Parents then examined copies of the achievement-test battery being used as the teacher outlined the means of administering the tests. Parents then scored several test booklets and plotted the profiles. The identity of the children taking the tests was not revealed.

38. *Interviews in Course Selection.* Every eighth- and ninth-grade student has a special interview with a faculty member in the selection of his courses. While this series of interviews is going on, a special late afternoon or evening talk and discussion to which parents are invited is scheduled. At this meeting the various curricula which are offered in our high school are discussed and the principles involved in making selections for particular pupils from the various offerings are considered. This meeting is repeated at different times so that all parents may be able to attend. Also each parent is urged to attend the special interview between the faculty member and his son or daughter. The results of various aptitude and prognostic tests are presented and discussed during this interview. The results of the interview are noted on a special form with reasons for the course selections made; each pupil is required to have his parents examine and sign this form.

After the pupils have begun the courses selected we set aside an all-day visiting day for parents to meet with teachers. This is a real parent-teacher meeting, the main purpose of which is to enable parents to mingle with teachers, get acquainted, and have time for as much discussion of individual pupils or sons and daughters as the parent may desire.

89. *School-Home Cooperation.* A group of ninth-grade girls had the reputation of being the "worst class" the school had ever known. They were unwilling to work on school projects, they were disrespectful and noisy. About the town they were nuisances. It was pretty clear to the school that the difficulty lay in the home conditions. But to discuss the matter without any previous accusations, the mother of one of the pupils gave a tea to which the mothers of all the other girls in the group were invited. The principal of the school, two scout leaders, and a community psychologist were invited too. After discussing what some of the causes of misbehavior might be, the parents decided upon a set of simple rules which all agree to enforce. Among these were restrictions on radio programs and telephoning in the evening and on going out during school evenings. Because all agreed to work together under the same regulations, the rules were much easier for the parents to enforce than would have been the case if most of the girls' friends were following the old régime. Everyone was highly pleased with the results. The conduct of these girls about town, in the movies, at home, and in school was so improved that the parents took heart and urged that the school sponsor a series of small discussion meetings for the parents of each grade of the junior high school to try to solve common home and school problems.

## Practice 20: COORDINATION WITH THE COMMUNITY

*Coordinating the Efforts of Community and  
School in Promoting the Successful Develop-  
ment of Pupils*

*Use This Practice to . . .*

- d. Develop desirable character and personality in pupils.*
- e. Develop good citizenship.*
- f. Develop attitudes and habits of good health and safety.*
- g. Use the full resources of community and staff in planning the program of public education.*

THE school is the creature of its community. There are a number of studies which show that the school itself reflects the kind of community in which it is situated. In terms of finance the community creates the school also. The community pays for its conception of a school.

*Public information and public participation are two of the most powerful tools for improving schools.* If a school is to improve to any great extent the public's conception of what a school is and what it can do must improve first. For the school reflects this conception; it is financed on the basis of this conception. This means informing the public not only in terms of publicity which is calculated to make the people think everything is right with the school, but also in terms of meetings, speeches, bulletins, cooperative planning sessions which are calculated to make the people see where the school can and should be improved.

No school has yet reached the point where it is doing all that it might

do to carry out what is now known about the processes of education. To bring about improvement the public must become informed. The public must participate. Participation grows out of information. As members of the public become more and more informed, they are able to give greater and greater help in the realization of new plans. Public participation is necessary because no small group of professionals can envision completely the emerging school; nor should they be entirely entrusted with designing either the better school or its objectives.

Deciding the objectives of education is a public problem. It is one of the most important acts of policy that can face any community. Through the means of public-information procedures the public of each community must be brought to see this. Deciding the program of education is, at least in part, a public problem. Furthermore, as the program of the school expands, the help of laymen in increasing the opportunities made available to youngsters will be needed. (As described in Practice 13, Community Resources.)

Public information and participation are not solely the responsibilities of administration. In fact a public information program developed by the administration can be wrecked by teachers who do not help it and understand it. Every teacher needs to consider himself a public-relations agent—in his dealings with parents, other members of the public, and especially in his dealings with pupils. Every teacher can also develop a program of public participation in connection with the work of his own class or classes.

*Teacher-participation in the life and activities of the community is a powerful instrument for improving public attitudes toward the school and toward the teaching profession.* If any layman looks upon teachers with an adverse eye it may be because he hasn't known good teachers personally. The best way to correct such attitudes in a community is through a great amount of participation by the staff in the activities of the community. Every teacher needs to consider himself first of all a contributing citizen in order to expand his own contacts in the community for the purpose of improving the work that he can do with boys and girls and in order to advertise his school among other citizens in the community.

In other ways the school may serve the community: through lifting the cultural level of the community especially. Band and orchestra concerts, art exhibits, participation in the promotion of community-betterment

drives—these are a few of the more usual ways in which teachers and schools are coordinating school and community by using the talents at the command of the school to bring enrichment to the community.

*Community services should be looked upon as the total effort which the community makes to improve itself.* The school is but one agency, though perhaps the most important, engaged in the rendering of such services. These services include recreation, health, entertainment, adult education, children's and adults' hobby interests, community planning, community meetings, and employment services. If it is desirable in any community that these services be coordinated with the end of making a better community setting for pupils to grow in, certainly the school, of all agencies, is in the most strategic position to coordinate them.

Coordinating the efforts of the schools with those of the community thus involves informing the public, securing public participation, participating in community life, serving the community, and performing the services of a manager wherever needed.

### **SAMPLE PRACTICES**

The practices presented in this section are classified under the following headings:

1. The Entire School
2. Lower and Middle Grades
3. Junior and Senior High School

#### **THE ENTIRE SCHOOL**

1. *Community Organizer.* Our community organizer is a full-time employee of the board of education whose function is to provide professional leadership for parent and other adult organizations. She is a former teacher and has had experience as a social worker also. She spends her time organizing and meeting with parent study groups, preschool observation classes for mothers of young children, classes for parents of adolescent youngsters, and so on. She canvasses parents to find out what they are interested in and to find out what they can do in the way of service to the school. She is a liaison worker between the schools and the Boy and Girl Scouts, the P.T.A., and similar organizations. She consults with teachers for names of pupils who do not but should belong to

## REASONS WHY . . .

### PSYCHOLOGY SAYS:

1. Children develop in terms of all the influences which affect them. (See Reason 1, Practice 20.)

2. You start to grow from where you are. This fact sometimes makes many school attempts seem futile. What can a school do to offset the effects of poverty, poor community health, delinquency, and crime? These conditions often determine pupil growth. Whatever the school does it must do in cooperation with the community if all the youngsters are to grow under favorable circumstances.

### SOCIETY SAYS:

3. The whole resources of society should be used in preparing new citizens for society. (See Reason 5, Practice 13.)

4. Public education is a cooperative enterprise. (See Reason 4, Practice 20.)

**SAMPLE PRACTICES (Continued)**

youth organizations of various types and arranges to have them approached by members of the organization. She finds plenty to do. At present her job is operated on an experimental basis to determine what functions an organizer of this type can perform in developing better co-ordination between community and school.

**2. Community House.** An interested neighborhood leader has been instrumental in helping our school organize a fund of several thousand dollars, contributed by businessmen, to take over and renovate an old warehouse in a poorly favored part of our city. The result is a community house with facilities for a nursery school, good-housekeeping demonstrations, game rooms, conference rooms, playrooms, roller rink, etc. From one company he secured the heating plant as a gift; from a music store he secured pianos and juke boxes. The house has a cooperative laundry with modern machines and dryers; it has a library, a kitchen, and community showers.

Many communities have public-spirited citizens who are willing to help the schools improve their facilities for serving youngsters and older people. Many are willing to give goods or money; others are willing to give services for securing such gifts. Some schools have obtained camps in this fashion, others have obtained farms, still others have secured nursery schools and recreational facilities.

**3. Getting Off During School Hours.** Teachers in our school may attend meetings of groups and clubs in the community to which they belong, even when the meeting occurs during school hours. Such clubs include the Garden Club, the Music Club, civic clubs, the Business and Professional Women's Club, and the American Association of University Women. When the meeting is held for only a short time, arrangements are made by the teacher to have another teacher supervise his classes in some specially prepared activity. When the meeting is for a longer time, the school board pays a substitute. "I believe," says our superintendent, "that participation in community life is one of the most important activities of teachers. If businessmen can get off and can permit their employees to get off to attend community meetings, certainly the school can do the same."

4. *Community Drives and Education.* Whenever special community drives come along we do not use them primarily as a means of gathering money from pupils. We use them as a means of developing community understanding among the pupils. During the Community Chest drive we have representatives from all the agencies that benefit from the drive come to the school to discuss the various services their agencies perform. Special visitors to the city and appropriate professional and businessmen from downtown are brought to the school in connection with Fire Prevention Week, Red Cross drives, the March of Dimes, the cancer drive, the Children's Museum, and so on. A recent street-improvement program was used to help children understand the city's water and sewage systems.

5. *Movie Theaters.* Since many school children attend the local motion-picture houses on Saturday mornings, the parent-teacher council appointed a committee to study movies. As a result of their study a motion-picture council was formed the aim of which is to bring better and more suitable pictures to the local theaters on Saturday mornings for children of elementary and junior-high-school age, and to organize a series of family movies on Friday nights for older students and adults. The cooperation of the local theater managers was secured. Recommended pictures are being shown on these occasions. Tickets are sold by parents in the schools. Parents act as supervisors at the theater. The student council carried on a continuous evaluation of the pictures and of the behavior of pupils in the theater, making suggestions for improvement in both instances.

6. *Education Association of Professionals and Laymen.* The Education Association has as its objectives the discussion of educational trends, the marshalling of public opinion behind policies of school-improvement, and the coordination of the work of developing public participation in and public information about the work of the school. It was organized by public-spirited citizens and is open to all persons interested in education—parents, teachers, and other members of the public. Membership by teachers is entirely on a voluntary basis. This association is neither a political group nor a pressure group of limited public interest. It aims to provide a medium for informing the public about the schools and the machinery for forums and discussions on school policies and procedures.

—including budget hearings. Although professionals are not excluded, officers are at the present time all laymen. Teachers function on some of the committees. Activities include the sponsorship of lectures on educational matters by outstanding leaders in the community, open discussions of educational policies, regular meetings where the relation of various community policies and projects to the welfare of the schools is discussed, and action growing out of decisions reached in such meetings.

7. *School-Dentist Meeting.* We have developed cooperation among the dentists of our community. They understand our school dental-health program and cooperate in its development. We started such cooperation by holding annually a luncheon given by the board of education for the dentists of the community. At this luncheon school people speak about the school dental-health program, the school dentist explains what he is attempting to do, or a member of the state department of education in charge of the dental program or a representative of the American Dental Association speaks. The aim of these meetings is first to inform the dentists about what we are doing in the school and second to point out to the members of the dental profession that the school dental-health program and the program of dental instruction mean a wider practice for dentists.

8. *Mailing List.* We keep a mailing list of persons in our community who are influential or who are interested in the activities of the schools. Such persons include the editor of the local paper, the presidents of various clubs and associations, and other persons prominent in community life. The list is continually under revision and is kept up to date. Annual reports, reprints of articles written by members of the school staff, and mimeographed bulletins concerning changes in school policy are some of the types of materials which are regularly mailed to these people.

9. *Lay Writers Group.* All school articles for our local paper and material for our regular printed bulletin which goes out to the community are written or rewritten by members of a group of laymen. Members of the group include board members and other qualified laymen. In this way we are sure of getting our material into "laymen's language." The group operates somewhat like the "rewrite desk" of a newspaper. Material prepared by teachers or members of the administration passes through the hands of this laymen's group. The members of the group

rewrite the material if they deem it necessary to do so, often checking with the original author to see whether they have retained his initial ideas. At other times a professional with a story to tell talks to one of this group about it. The latter gets sufficient information to write an article. In general it may be said that if an educational process can be described sufficiently clearly to a layman that he can understand it and write about it in his own words, then others will be able to understand it also.

10. *School Radio Stations.* The 100-watt radio station in our community is owned and operated by the public schools. It operates on the standard broadcast band and is on the air from 10:00 A.M. to 4:00 P.M. The station has a professionally trained director and an engineer, but all the rest of the work pertaining to programming and broadcasting is done by teachers and students. Music, science, history, and so on are featured in the station's programs—many of them live programs using pupils. No commercial announcements are made.

11. *School Movie.* Our schools are making a three-reel film in color on the subject of education in our community. The project is being supervised by the audio-visual department. The script was planned by a committee of teachers and administrators and then written with the aid of the director of audio-visual aids. High-school pupils are doing all the filming and editing. The film is intended to interpret the aims and methods of our schools in developing useful citizens from kindergarten through adult education; it is aimed at parents, taxpayers, and pupils.

Many schools have the resources to make movies for such purposes. The average school staff has personnel which can write, do photography, and edit sufficiently well to produce a thoroughly acceptable motion picture. Furthermore, the making of a movie is one of the most stimulating ways to galvanize the interests of the staff and student body.

12. *Parents' Room.* We have a parents' room to which parents may feel free to come at any time. Most parents automatically go there when they first enter the building to leave their wraps and lounge while waiting for appointments with teachers. It is an attractively and comfortably furnished room, and on the walls and reading tables are many things intended to create interest in the school. On the reading table are magazines and books on education, pamphlets on our school, and copies of booklets

made by various classes. On the bulletin board are clippings and pictures of a similar nature. Children's individual height and weight record cards are mounted under the caption "Watch Us Grow." Sleep records secured from parents are similarly posted in graph form. Information which is helpful to parents is posted, such as a schedule of luncheon fees and methods of payment. Because this room is inviting and contains data of interest to individual parents, it is very frequently visited and its information forms the basis for many parent comments and discussions.

13. *Fathers' Day.* Washington's birthday is Father's Day at our school. Most businesses and offices are closed on that day but school is still running. Special programs and dinners are prepared for the fathers. They are urged to spend the whole day at the school entering into activities with their children.

14. *Informing Board of Education.* Since the members of the board of education cannot get into the classrooms to observe the work of the pupils, the pupils' work is brought to them. Each month, in the room where the Board of Education holds its regular meetings, there is a display of work done by pupils in all the grades of an elementary school. The display consists of written work, artwork, mapwork, or some project or chart done by pupils in their regular classroom lessons. The board of education very kindly commends that particular school in the local newspaper. Each month a different school is featured.

15. *Community Newspaper.* Because our community is not served by any commercial community newspaper, we decided to turn our high-school newspaper into one which would serve the community. We employed an English teacher who had had a great deal of experience in the field of journalism; this teacher was made faculty sponsor of the paper. Pupils were organized as reporters, writers, editors, and so on. A complete newspaper staff was made up from among the pupil personnel. We featured not only school news but a great deal of community news in our paper—personals, local events, feature articles on purely community activities and personalities, etc. Our school news was carefully looked at from the point of view of how the public would react to what was printed. We pay for the paper out of our public-relations budget. No subscription charge is made. Each issue is delivered by pupils to practically every

home and business in the community. The number and character of public comments indicate that we are justified in paying for a paper of this sort out of our public-relations budget; the amount of experience which pupils get from a productive job of this sort justifies our handling it as an extra-curricular activity for pupils.

16. *Community Music.* Summer band concerts have been held regularly for a number of years by our school band and have proved to be very popular. They are well attended and offer additional opportunity for band members to perform in public. During the school year concerts are held on Sunday afternoons in the school auditorium. It is the policy of our music department to gain as much experience as possible for qualified music students in the various musical organizations of the town. They sing in church choirs, sing and play before various clubs, and participate in various choral societies. Music is provided for any worthwhile community function or program. Such activities make the pupils more a part of adult community life, give them a place in the community in return for their talent, and serve to enrich the life of the community with music.

#### LOWER AND MIDDLE GRADES

17. *Parents "Learn to Read."* Parents are shown how much more efficient is the teaching of reading by the modern method than by the old alphabet method by means of the following experiment: Seven "words" are presented made up in an alphabet of arbitrary characters. Different odd characters are chosen but consistently used as this arbitrary alphabet: # is a, \* is b, and so on. But of course no parent "pupil" is told what this alphabet is, nor is it in any way displayed except in the words made up from it. These seven "words" are presented several times on cards held up before the "class," as in a regular classroom situation. "Pupils" are told at each presentation what each word means. At successive presentations they are not told until after they are given an opportunity to write down the meaning on a slip of paper, if they can remember. This procedure is continued until most can recall and write down the English-alphabet equivalent without being told.

The teacher then asks for a discussion of how those participating managed to remember the meaning of each word. It developed that certain

conformations, a certain way the ending looks, the initial arrangement of characters, peculiar over-all characteristics, etc., are the clues by which word meanings are remembered. In no case will it appear that any person remembers a word by analyzing all of its characters into the "alphabet." This circumstance is then made the point of departure for a brief discussion of why modern teachers of reading do not begin with the alphabet.

18. *First-grade Parents' Meeting.* At most parents' meetings it is difficult to get all the parents out—especially those whom you want to reach. However there is one time in the life of a pupil when parents usually come to school. This is on the first day their children come to the first grade. This is particularly true if special effort is made to invite them and if a luncheon is served. In our school, children are brought to the first-grade room and a corps of high-school girls and boys studying child care are put in charge of the children. It is to the parents that the teacher devotes all her attention during this morning of the first day.

We meet in a comfortable room around a large table or small tables pushed together. We discuss beginning reading. We talk about the necessity of children learning to express themselves acceptably and well, the importance of trips in building up a background of experiences, and so on. We stress the importance of a child's becoming accustomed to and feeling at home in his new surroundings. We discuss the concept of reading readiness and what it means and the emotional aspects of learning to read. Finally we talk about the role which the parents must play in assisting the school to get the youngster off on the right foot in his schoolwork and what they may expect in the way of progress during the first year. We urge them to come back for a visit any time they would like.

19. *Mothers at Luncheon.* Each week we have a mother of one of the children of our class as a guest at luncheon. This is usually on Friday. Early in the year the mothers are asked to indicate which Friday they would like to come. An attempt is made to develop an especially home-like atmosphere. Luncheon is secured from the kitchen and served in the classroom by the children, who make an attractive table setting on our large library table. The guest is seated in the guest-of-honor posi-

tion, and her child is seated at her right. After the luncheon brief talks and entertainments are given by the children.

### JUNIOR AND SENIOR HIGH SCHOOL

20. *Recreation Program.* The Recreation Committee of the parents' association, in cooperation with the junior- and senior-high-school student councils, has developed recreation and social programs in addition to the schools' regular after-school sports program. The parent-sponsored program includes a summer social center in the school cafeteria with reading tables, games (ping-pong, chess, and the like for evenings and rainy days), parties and dances (chaperoned by parents), and refreshments on sale. Also this committee has built and maintains two additional tennis courts for young people for summer use and operates low-cost dancing classes for school children.

21. *Employee Rating Sheets.* Among the materials I secure for my students in vocational guidance are recommendation blanks, rating sheets, and other personnel forms used by businesses and industrial concerns in our community. Pupils are given copies of these materials to study. In this way they learn that employers are looking for persons of good general character, satisfactory personality, good habits, punctuality, good health, and general school skills, as well as specific job training.

22. *Vocational Advisory Committee.* There are a number of industries and businesses of different types in our community. Among the vocations our graduates undertake are laboratory technician in chemical plants, machinist, machine-operator, clerical worker, and other skilled and semi-skilled occupations for which the school may furnish terminal education. Realizing that a closer liaison between these industries and our schools was needed, our superintendent interested a number of local industrialists and businessmen in organizing a vocational advisory committee. The function of this committee is to work as a clearing house for ideas and suggestions emanating both ways—from business and industry and from the schools—bearing upon the quality and diversity of our educational program. This committee has given the schools insight into needs which we would not otherwise have recognized and has been instru-

mental in breaking down many barriers to improvement of our vocational program.

The committee is made up of several members from each vocational field (printers, painters, electricians, etc.), several members from management (each industry or business is represented), and people from the school (both vocational counselors and teachers in other fields). There are in all approximately fifty citizens on the committee. Both as a medium for public relations and as a medium for securing technical advice a large board of this type seems superior to a small board.

23. *Community Orchestra.* Our community symphony orchestra was organized around the high-school orchestra as a nucleus. Adults who were proficient at various instruments were brought in to augment the top-notch players of the school orchestra. Proficient players in the school orchestra remain with the community orchestra upon graduation. In this way a continuing source of new talent is drawn upon and the community orchestra is continually improved. This project has not only developed community interest in music but in the school as well.

24. *Town Report.* When the officers of our local government desired to make a report on finances and taxation, they came to the school art department for help. The pupils of the art department assisted in planning the layout of the booklet, making illustrations and graphs to show where taxes came from, how they were spent, and new projects for which tax money should be spent.

25. *Soil-testing.* A soil-testing service has been offered by our chemistry department for several years. Any individual who wishes to determine the soil content in his garden with respect to the fitness of the soil to grow certain plants may bring samples to the school and have them analyzed by students of the Chemistry Club.

26. *School Boosters Club.* Community interest in our high school is promoted by the Boosters Club. This is an organization of school-minded citizens whose financial backing and moral support contribute to the expansion of the health and physical-education program of the school. In cooperation with school people the club sponsored a wrestling team for

post-high-school boys, organized pep rallies for sports events, awarded sweaters to athletes, and raised funds to send the football team to a training camp. The club's chief contribution to education, however, was its survey of the health and physical-education needs of the entire school system. On the basis of its recommendations an enriched program is being planned which will provide for every boy and girl in the school. It is going to cost considerably more money than our present plan and the Boosters Club is promoting the financing of the project.

## Practice 21: STAFF PARTICIPATION

*Using the Ideas, the Help, and the Responsibility of Teachers and Administering the School Program*

*Use This Practice to . . .*

- g. Use the full resources of community and staff in planning the program of public education.

THIS practice deals with administration. It presents administration as a single practice and therefore deals with that field somewhat summarily. Actually administration admits of as many techniques as this book has already presented of teaching techniques. Only certain samples of practice having to do with facilitating the work of teachers in carrying out the previously described practices are given here. Administration is far more than this brief treatment would lead one to believe. It has its own purposes, and its own reasons why (which, by the way, are omitted here).

*A primary function of administration is improving the school.* In this sense (as well as in certain other senses) all teachers are administrators. For there can hardly be a good teacher anywhere who is not concerned with improving the work he does with youngsters. In the good school the teacher's job is looked upon as something more than covering a class. Teachers are sometimes released for a day, for a week, for a semester, to work cooperatively on a new course of study, or to locate and assemble materials, or to plan the organization of a new educational service, or to write public-relations materials, or to serve on some important community agency. All these activities directly bear upon doing a better job of educating youngsters—through planning and consultation.

*An important characteristic of the good administrator is his ability to seek ideas from many sources.* No one man can know all the answers. There is hardly a teacher who has ever taught who has not had some idea on the workings of the school that, put in practice, would have improved education to some extent. A good administrator is sensitive to the ideas of others, both teachers and laymen. Almost every layman has been to school and since then has had a practical opportunity to test what the school gave him. The total resources of the community—the teaching staff, laymen, and pupils—have scarcely ever been brought to bear upon improving education. The first step in this direction is staff participation, and the second step is lay and student participation with the staff.

*Another characteristic of the good administrator is his ability to facilitate the teaching job.* Most of the sample practices cited below deal with this administrative characteristic—supplying the teachers with the tools and materials to work with and facilitating new teaching practices through special administrative arrangements, through furnishing certain types of specialized services, through organizing fruitful types of in-service programs, and so on. Other examples show the teacher at work as an administrator—making necessary arrangements for the improvement of his own work, using special administrative devices in the classroom.

### SAMPLE PRACTICES

The practices appearing in this section are classified under the following headings:

1. Teachers of All Grade Levels
2. Lower Grades
3. Junior and Senior High School

#### TEACHERS OF ALL GRADE LEVELS

1. *Health Follow-up.* We use the following system of follow-up after physical inspection has uncovered physical defects. The school nurse furnishes the principal with a list of pupils having defects of various kinds: hearing, dental, eye, general physical, etc. This list is on a form which has a place for names, columns for checking specific defects, and spaces for the follow-up record.

The follow-up consists of five steps. First is a form notice sent to the

parent with defects indicated, suggested manner of correcting them, and reasons for correcting them. There is a request for a reply when the correction has been made. The second step is a telephone call by the nurse. The third step is a personal letter from the principal. The fourth step is a personal visit to the home by the nurse. The fifth step is a visit to the home by the nurse and principal together. Where the reasons for failure to make the corrections are financial ones, we are able to defray expenses through a fund to which the principal has induced several clubs of the community to contribute. It is seldom necessary to follow through all five steps in making sure that remediation has been taken care of.

**2. Reading Coordinator.** We have organized our reading-clinic program as a part of the guidance service which serves the entire school system—elementary and secondary schools. We have established a reading clinic in each of our elementary schools. All clinics share the same equipment (metronoscope, flashmeter, telebinocular, and audiometer—which are moved around from school to school); and they share the time of a common staff (reading coordinator, school psychologist, school nurse, and guidance secretary). But each school has an independent library of teaching and testing materials.

Clinical analysis and regular remedial instruction are offered all pupils whose achievement in reading and spelling is not up to their capacities. The reading problem is very frequently a guidance problem, requiring investigation and adjustment regarding home, class, and other social situations. The reading coordinator thus performs the dual function of reading clinician and guidance counselor. Also he holds meetings with teachers to acquaint them with remedial and preventive techniques, recommends pupils for special work, and discusses individual cases with them.

**3. Assignment of Physical-education Teachers.** We have found this plan of assigning physical-education teachers to be very successful. We schedule most physical-education teachers for both elementary and high-school classes, rather than for only one level. Also we change each teacher's assignment in this way: if he had third-, sixth-, and eleventh-grade groups during one year or semester, we give him some other combination, like fourth, fifth, and twelfth, or fourth, seventh, and tenth, for the next assignment. In this way he is continually meeting new pupils or going

along with the same pupils, or picking up pupils again whom he had formerly.

The value of this plan lies in the fact that there is at least one teacher who has worked with any given child who has been with us from first through twelfth grade—a teacher who knows a great deal about him and has seen him develop physically and socially throughout the twelve years. Furthermore, pupils moving from sixth grade to junior high school or from junior to senior high school do not have to make a completely new adjustment to all of the teachers whom they will meet.

4. *Clerical Assistance.* A full-time textbook secretary, who does all the record-keeping, fills orders for texts in our school. A full-time mimeographer is kept so busy that it is necessary to schedule time when a teacher wishes teaching and test material mimeographed. There is also a full-time secretary who does nothing but take dictation from teachers and furnish them with other secretarial assistance.

5. *Camp for Teachers.* Our school district is fortunate in having an educational camp. During the three weeks before school opens, however, the camp is reserved for the teachers to enjoy a preschool vacation and professional tune-up. A small fee is paid by each teacher in attendance and the rest of the cost is born by the school district. Teachers may ride, swim, hike, lounge at the cabin or in the open, and enjoy other vacation activities for most of the day. The hours between 5:00 and 7:00 P.M. and 8:00 and 9:30 P.M. are for teachers' meetings, refresher courses, and similar professional activities. Courses with university credit are offered in different fields from year to year—music, reading, science, etc.

6. *Orienting New Teachers.* Our teachers' council has a program for the orientation of new teachers. As soon as new teachers are elected by the board their names and addresses are given to the secretary of the council. The secretary sends a welcoming letter and invites the teacher-elect to visit the school and community in the spring, when he entertains him at lunch and escorts him through the building and the community, introducing him to members of the staff and to citizens. The new teacher's needs and desires in housing are discussed, and assistance is given him in securing a place to live.

*7. Informing New Teachers.* A series of orientation meetings is held for all new teachers. For each meeting, which lasts about an hour, the new teachers are released from their regular classes and substitutes are furnished. The purpose is to inform new teachers of the services which the school system has available to them and their classes. Each person in the central office explains the phase of the service under his charge. Retirement methods of payment, audio-visual services, supervisory services, equipment available, how to secure special services and equipment, plans for new services, and many similar matters are presented during this series of meetings.

*8. Local Government for Teachers.* There are very few books which cover the topic of local government adequately. Patterns of local government vary considerably from state to state and community to community. School civics texts are able to touch upon only the broad features of local government and do so quite sketchily and often quite uninterestingly. Therefore we organize a series of institutes for our teachers, to help them become acquainted with local government in our community. The institutes were planned by a committee of teachers, administration representatives, and local government officials. At each institute various persons active in our local government discussed the work of their offices. Each presentation was made in round-table style with questions following the initial talk. This was not only a broadening experience for the teachers personally but gave them a great deal more confidence in presenting the topic in their classes.

*9. Better Human Relations.* Our teacher committee on better human relations is now about two years old and represents every school in the system. Much of its time has been spent in becoming acquainted with material in the field of human relations and with people working in that field in other communities. It has interested teachers in attending summer workshops in human relations and has put on one successful institute on human relations which has resulted in many requests for a course in human relations to be given in our community. The committee is now reviewing filmstrips and films, studying the techniques of conducting film forums, and laying plans for the organization of a course which it hopes to offer next year.

10. *Institute for Teachers and Others.* Our regular teachers' institute was given a new slant when we planned one not only for teachers but for fathers and mothers. We felt the addition of parents would give the sessions a fillip they had not had before and would inject a new note of interest into the program. The institute was sponsored jointly by the parent-teacher council and by the teachers' association.

The session for elementary-school parents and teachers began with an address on child development. Discussion groups followed on reading development, home and school problems, the comics, radio, and movies. Discussion leaders chosen included parents, teachers, and principals.

The session for teachers and parents of high-school pupils opened with an address on adolescence and family life. Discussion groups followed on the junior-high-school age, making citizens for a democracy, managing family relationships with adolescent boys and girls, and emotional adjustment at adolescence.

11. *Guide to Professional Reading.* Our professional library has over two hundred books covering all phases of the profession, and more are added each year. In addition our library subscribes to twenty or more professional magazines. In a busy teacher's life it is difficult to know what to read or what selections would be of most value. To take care of this problem we use a rotating committee of teachers whose work has been extremely valuable. Brief annotations of the contents of the books are being prepared. As magazines come in the committee studies these from the standpoint of different teachers' needs and compiles a list of articles with an annotation and the name of the magazine in which the article is to be found. Our school also has many old copies of *Grade Teacher*, *Normal Instructor*, *American Childhood*, *School Arts*, *National Geographic Magazine*, etc. The committee this year started clipping various articles on particular units of work and filing them as to subject. Indexed on the cards with the magazine material are many pamphlets put out by travel bureaus, government offices, factories, and business concerns. Lists of these materials are duplicated and copies circulated to every teacher.

12. *Research References.* Part of the job of our librarian is to maintain a periodic search of the literature for reports on the latest findings in edu-

cational research bearing upon teaching method. Periodically she makes a report of a page or two, listing and briefly describing the contents of references which have been found. These reports are mimeographed and distributed to every teacher.

13. *Student-council Loan Fund.* Our student council maintains a loan fund for pupils who are in need of glasses or dental treatment. We secure contributions for this fund both from pupils and public at the same time that the Community Chest drive goes on and also put on one social or dramatic event during the year to secure funds. Any pupil may secure a loan from the fund, on his own signature and with the written consent of a parent, to defray expenses for glasses and dental care. It is a loan to the pupil. He obligates himself to return as much of the money as possible. The purpose of the repayment is not to reimburse the fund but to start pupils on the road toward financial responsibility.

14. *Empty Rooms.* A decline in enrollment has left our old elementary building with many empty rooms. These have been put to many different uses—a visual-aid room which is also a museum, a shoproom, a playroom.

Many teachers have been given two rooms for a single class. Sometimes these two rooms are divided by a folding wall; when shut this wall permits the spare room to be loaned on occasions to other classes that do not have extra space. At other times the two rooms have been made into a single space by removing the partition which originally separated them.

It is interesting to see what individual teachers can do with extra space. The teaching program seems to grow because of the increase of space—even with forty youngsters in a class. But the handling of a large number seems easier with double space. The teacher usually places her desk so as to command both spaces. One room is used for discussion, study, and quiet activities; the other is used for artwork, indoor games, construction, small aquaria, animal cages, etc. The extra space makes it easier to teach pupils individually and in groups because of the variety of activities which the teacher is able to organize.

15. *Movable Furniture—Old Style.* Although my room is equipped with old-style bolted-down desks I have worked out an arrangement whereby I can move them to secure space in any part of the room when

needed. All the desks of a row are bolted to long strips of one-inch by three-inch lumber, rather than to the floor. A careful push by a few youngsters is all that is necessary to move a whole row of desks closer to the wall or in the other direction.

16. *Music House.* When our building was overcrowded the board of education relieved the space shortage by purchasing a small house which was adjacent to the school grounds. In this house the music department was installed, and the necessity turned out to be a virtue. For the band, orchestra, and glee clubs may now work and not disturb the rest of the school. In the building we have separate practice rooms for those working on different instruments. Before or after school, or whenever he has a free period, a student may put in extra time, if he desires, and make arrangements to use one of the practice rooms.

#### LOWER GRADES

17. *First-grade Organization.* During the first weeks of school only half of my first grade attends in the afternoon. All the children come until 11:30. Then only half the class continues in session until 12:30, when they are through for the day. The other half returns at 2:00 to remain for an hour. The following week the half which attended during the morning hour comes during the afternoon, and vice versa. This plan reduces the size of the class for a portion of the day during the critical period when I am getting acquainted with the children, and it gives me more of an opportunity for individual and small-group work with them.

18. *Kindergarten Teacher Visits.* The first two weeks of school are spent by the kindergarten teacher in visiting in the home of each child enrolled in the kindergarten. This is made possible by delaying the actual opening of kindergarten until two weeks after school officially begins. The plan gives the teacher the opportunity of becoming acquainted with the parents and observing the home environment, so that from the very start she may better understand the children in her charge. During these home visits the parent has the opportunity to discuss with the teacher any handicaps, idiosyncrasies, developmental problems, and other necessary matters. Since the child is already acquainted with the teacher through this home visit, his adjustment to school is much easier.

19. *Picture Signatures.* Our kindergarten and first-grade teachers have introduced a novel way for designating the assignment of storage space to pupils who have not yet learned to read. Each drawer is labeled with a snapshot of the child whose supplies are kept in it. Later on, when it is time to begin looking at words, names are posted below the pictures. The pictures help to hasten the identification of the word.

#### JUNIOR AND SENIOR HIGH SCHOOL

20. *Homeroom Guidance Setup.* Our guidance director counsels only those few pupils who are referred by the regular counselors—the teachers. Most of the guidance director's time is taken up in working with the teachers. The homeroom teacher is the responsible guidance counselor for the group of pupils in his class—averaging about twenty-five. The boys are all under men homeroom teachers. The girls are all under women homeroom teachers. Each homeroom teacher remains with his same group throughout its four years of high school. However in individual cases pupils may be changed from one homeroom to another if the evidence indicates that this would be a good thing to do in the case of personality clashes, unfortunate attitudes of classmates, or for any other good reason.

The homeroom organization has a great deal of student control. There are a number of student-planned programs. Any homeroom may promote the organization of clubs of part or all its members, including members from other homerooms, if desired. There is also a carefully worked out program of group guidance carried out by the homeroom teacher. A guidance course of study has been developed by the teachers of the school with the help of the guidance director. In addition, the guidance director works with teachers on techniques of individual guidance and has prepared a manual for their use. Depending upon the needs of individuals, various amounts of time are scheduled by the teachers for personal guidance-work with individual pupils.

21. *Guidance-advisers.* Letters are sent to all prospective students of our high school setting forth in simple terms information about the first year's work. Grade-advisers are assigned to entering classes before they arrive. These grade-advisers study the records and applications of their advisees prior to their coming to the school. Particular attention is given

to recommendations, comments, and estimates of elementary-school teachers. Armed with a small card containing the salient information selected from the student's record, the adviser visits the prospective student in his own home school. There the adviser talks with each pupil and finds out from him, from teachers, and from the school principal all he can about the individual—his weaknesses and strengths, interests, home conditions, economic background, character, school record. The pupil then comes to the high school with a friend already there. Shortly after his arrival another conference is scheduled with the adviser to find out whether any difficulties are arising in the new school situation. This adviser remains with the pupil throughout his stay in the school—except that transfers may be made in those few cases where satisfactory rapport has not been established.

22. *English-teacher Helps.* Many English teachers deplore the fact that science and social-studies teachers do not require a high level of writing of students who prepare papers for them in their particular fields. They urge that all teachers should be English teachers so that the requirement of good English expression may be a continuous influence on students.

In our high school the English teacher has undertaken to do something about this himself by offering a special service to all students. When papers are to be written by pupils in social studies or science, the teachers of those fields inform the English teacher, who then sets up a short series of group meetings for pupils who are to write the papers. These may be special meetings or they may occur during the regular English period. Topics which he covers include how to take notes, how to quote sources, how to assemble and interpret data, how to express ideas in clear and effective English. But each phase is discussed at the time when the pupil is struggling with that phase of his paper; and the instructions are given in terms of the subject he is writing on.

23. *Getting Around the Schedule.* Our eleventh- and twelfth-grade English and history classes are scheduled for the last two periods in the afternoon. They meet in adjacent rooms, and the teachers of these two classes collaborate in a correlation project. Since it comes at the end of the day, this double period can and often is extended into the afternoon. For example an outside speaker was brought in to conduct three one-hour lectures on world affairs. These two classes met in the auditorium

to hear him and conduct an hour-long forum discussion after each lecture. No other class was in any way upset because of this arrangement.

**24. Vocational Placement.** Our placement bureau is open throughout the summer to assist both graduates and nongraduates in securing employment. Services of the bureau are available all year and at all times for anyone of any age. The bureau's services include contacts with employers, visits to prospective applicants' homes, information on employment conditions in various fields, issuance of working papers, etc. An exhaustive follow-up is made in September (after graduation) of all those who graduated or left the school the previous year. One-year and five-year follow-ups are made regularly.



# Supplement A: THIRTY PSYCHOLOGICAL GUIDES TO GOOD TEACHING

1. *No one learns without feeling some urge to learn.* It may be fear, need, inborn drive, curiosity, mystery, challenge, importance, or personal attachment—or any other motivating force. The force has to be there. And the more the force wells up out of the person himself, the more the person will learn of his own accord.
2. *What a person learns is influenced directly by his surroundings.* If you want a person to learn something, make that thing a part of his environment, so that he may see it, live with it, be influenced by it.
3. *A person learns most quickly and lastingly what has meaning for him.* The pupils do not always see the meanings the teacher sees. An act takes on meaning from its outcome—what the act produces. To produce a thing he wants or can see the value of, a person is likely to master the skill necessary.
4. *When an organism is ready to act, it is painful for it not to act; and when an organism is not ready to act, it is painful for it to act.* This means that some time must be spent in preparing learners to learn, that physical action is as much a part of school as mental action.
5. *Individuals differ in all sorts of ways.* When you get a group of people together to do anything, some will be better than others. It is easy to see that some people are taller than others, less easy to see that in the dozens of abilities that relate to success in learning any class will show a vast range of differences.
6. *Security and success are the soil and climate for growth.* No one can learn well when he doesn't belong—any more than a plant can grow without roots in the soil. No one can succeed on failure.
7. *All learning occurs through attempts to satisfy needs.* What people do, consciously or not, they do because of need. And as they do, they learn what to do to satisfy need.

8. *Emotional tension decreases efficiency in learning.* Before the skills and facts of teaching come friendliness, security, acceptance, belief in success. Without these, tensions are produced. Constant, monotonous attention to any one thing is also a producer of tension.

9. *Physical defects lower efficiency in learning.* A sound mind in a sound body. For greatest efficiency in any kind of teaching physical health comes before mental vigor.

10. *Interest is an indicator of growth.* We don't teach to get interest; but if interest isn't present the teaching isn't prospering.

11. *Interest is a source of power in motivating learning.* When you are interested in a thing you are in it and feel a part of it. A teacher who doesn't hook his teaching to whatever pupils feel they are already a part of is not making the greatest use of the powers he has at his command.

12. *What gives satisfaction tends to be repeated; what is annoying tends to be avoided.* Practice makes perfect only when it is the right kind of practice. Learning is efficient if the pupil tries to master what fits his abilities and what gives him satisfaction.

13. *The best way to learn a part in life is to play that part.* This is the apprenticeship idea. Upon leaving school the parts in life which pupils are to play are not completely new to them if they have practiced those parts in the school.

14. *Learning is more efficient and longer lasting when the conditions for it are real and lifelike.* Attitudes, habits, skills for life are best learned when the activities of school are like those of life. Methods of teaching should be as much as possible like those one uses in actual living.

15. *Piecemeal learning is not efficient.* We learn facts and skills best when we learn them in a pattern, not as isolated bits of subject matter. The facts and skills that we learn become part of a pattern when we learn them in relation to their use—as part of a project, job, or other enterprise.

16. *You can't train the mind like a muscle.* There is no body of knowledge that is the key to "mind-training." There is no set of exercises that will "sharpen the wits" as a grindstone will sharpen steel. This means: Don't isolate the things you want to teach from the real setting in which they belong.

17. *A person learns by his own activity.* He learns what he does; he gains insight as he learns to organize what he does. Within certain limits, the more extensive a learner's activity the greater will be his learning.

18. *Abundant, realistic practice contributes to learning.* Learners need much practice in the many intellectual, creative, and social acts which we want them to master.

19. *Participation enhances learning.* Participation is essential to any complex learning. Complete participation is important—from planning to checking the results.

20. *Firsthand experience makes for lasting and more complete learning.* There is a difference between reading and hearing about something secondhand and the kind of knowledge and insight that come from firsthand experience.

21. *General behavior is controlled by emotions as well as by intellect.* Far more than a place to train only the mind, the modern school is concerned with training the emotions also.

22. *Unused talents contribute to personal maladjustment.* Not only are unused talents a waste to society; they form a core of dissatisfaction in the individual. Frustrated talent can lead to many kinds of neurotic symptoms.

23. *You start to grow from where you are and not from some artificial starting point.* It is unrealistic to assume that pupils can move through the grades of school like taking the steps on a ladder, jumping from step to step. It is impossible to move a pupil on from some point or grade standard that he has not yet achieved.

24. *Growth is a steady, continuous process, and different individuals grow at different rates.* It is impossible for a class of first-graders to move along all together until they come to the twelfth grade. Each individual learns, but at his own rate. His growth is steady; he does not leap from grade to grade.

25. *It is impossible to learn one thing at a time.* It is impossible to turn everything else off while learning two times two. The learner as a whole responds to his setting as a whole and takes in many things besides two times two. Learning by problems, topics, and projects, replacing learning by bits, makes capital of this fact.

26. *Learning is reinforced when two or more senses are used at the same time.* One-cylinder learning sticks only to reading or only to listening. Pupils learn better if they see with the eye, touch with the hands, hear with the ears, heft with the muscles, at the same time that they are seeing with the mind's eye.

27. *The average pupil is largely a myth.* Grade standards are an average which every pupil is expected to achieve. But any standard that you can set will be too difficult for some, too easy for others. The achievement of a group scatters over a wide range—only a few are at the “average” point. A far greater number are scattered above and below the average.

28. *If you want a certain result, teach it directly.* Your pupils are not born with the skills you want them to have; nor can we always depend upon other teachers to teach pupils to our satisfaction. If your pupils do not know what you want them to know, the most efficient thing to do is to teach it to them.

29. *Children develop in terms of all the influences which affect them.* Not only the 180 days of school but the 365 days of living in school, home, and community go to make a person what he becomes.

30. *It has been said that a person learns more in the first three years of his life than in all the years afterward.* However this may be, it is certain that the early home life is vastly important. Accordingly, to improve its effectiveness a school must do what it can to improve the educational setting of the home.

# Supplement B: TWENTY SOCIAL GUIDES TO GOOD TEACHING

1. *Make the investment in time and money count.* Society has invested for them the time that pupils spend in school. The money that society invests in education should be efficiently spent.
2. *Keep your eye on the real and significant concerns of human living.* One hope is that the new crop of citizens will be at least as able to cope with modern problems as their elders were with their problems. Teachers should draw the attention of pupils, by whatever means they can, to issues, facts, and acts basic to our society. Whatever we teach can have value only in terms of the concerns of human living.
3. *We should help those who have handicaps.* In a democracy we try to compensate individuals for deficiencies in health, wealth, and inheritance and at the same time draw from each whatever he can give. We start with the premise that everyone has good in him, and we do everything we can to give the good a chance.
4. *The greatest good for society is the greatest good for its individuals.* The total effectiveness of any society is the average efficiency of its individuals. The smallest increase in an individual's competence is a contribution to the whole of society.
5. *We should try to draw out the full capacities of everyone.* Democracy means, in part, that everyone shall have his chance. In this complex age, our people must know more than ever before; and the skills needed for today's work are more complex than ever before. It is part of the school's obligation to uncover talent wherever it can be found and develop it. No other institution has such an opportunity.
6. *We should teach people to do better those desirable things they are going to do anyway.* This is Briggs's famous dictum. The school is a tester and developer of talent for doing those things which someone must do well to keep our society working.

7. *The basis of a strong nation is healthy people.* That is why attention to physical development is as important a part of the modern school program as any other activity.

8. *The school is a simplified version of society.* That is why we choose the salient aspects of society and introduce them into the school—to make a laboratory in which pupils may practice all the cultural, intellectual, and social acts that go to make up our society.

9. *Make what you teach useful and teach it so that it will be usable.* There is no room for deadwood in a modern school.

10. *The school should make up for the work of those agencies of informal education that have declined as educational agencies in modern society.* The home, the farm, the small town all exerted strong educational influences in other years. They offered many experiences that matured boys and girls. But our society is changing. What agency except the school can give to boys and girls today the values that used to come from apprenticeship to craftsmen, duties in the home, going to work at an early age, part-time jobs, contributing productively to the life of home and farm?

11. *Free access to the facts and free discussion are basic to democratic society.* Since in a democracy every individual is free to decide what he thinks, democracy owes to itself the duty of teaching its citizens how to get facts and how to interpret them.

12. *A common culture requires of its members a common set of skills.* There are some things which everyone should know, some things which everyone who lives in our society should be able to do. These things all schools must teach, if possible, to all pupils.

13. *The resolution of differences is the greatest task today.* Individuals differ; so do groups; so do nations. However well we take account of individual differences, we must—and in a new way—take account of individual and group similarities, in order to go about the task of fitting individuals into a cooperative society.

14. *It is the school's special privilege to pass on the cultural heritage of the world.* This has been a purpose of education since its beginning.

15. *Great creative traditions develop in schools.* "Schools of painting," we call them; "schools of writing, schools of thought." The word "school" used here is not used in quite the same sense as we use it normally. But both uses have this in common—people working together under the guidance of some leader.

16. *Schools should keep abreast of our rapidly increasing knowledge of the world.* This means that current materials should be used in plenty and continually replaced.

17. *Schools should keep abreast of technical improvements in communication.* Motion pictures, sound-recording, radio, television, training aids—these are some of the media of communication that for some purposes far outstrip the printed page in teaching potentiality.

18. *The whole resources of society should be used in preparing new citizens for society.* Modern American society finances public education far beyond what any previous society has ever attempted. The schools should be made even more efficient by drawing the whole community into the process.

19. *A major hope is that the school is our most effective instrument for improving society.* From their beginning, schools have been viewed by legislators and other laymen as a major instrument of public policy. Great faith has been placed in the power of schools and teachers, as any study of school law will show.

20. *Public education is a cooperative enterprise.* The more cooperative the enterprise, the better the school.

## Supplement C: ACKNOWLEDGMENTS<sup>1</sup>

The authors acknowledge the courtesy of the Metropolitan School Study Council, the Pennsylvania School Study Council, and the Educational Policies Commission in granting permission to use practices collected in various studies of these organizations.

In so far as the places can be identified, the school systems where the sample practices described in this book have been observed in use include:

Alexandria, Pa.; Ardsley, N.Y.; Baltimore, Md.; Battle Creek, Mich.; Beth Hayeled School, New York City; Bellefonte, Pa.; Bloomfield, N.J.; Bronxville, N.Y.; Carlisle, Pa.; Carrollton, Ga.; Cincinnati, Ohio; Clearfield, Pa.; Corpus Christi School, New York City; Cranford, N.J.; Cresson, Pa.; Crystal Springs, Miss.; Deming, N.M.; Denver, Col.; Detroit, Mich.; Dubois, Pa.; Eastchester, N.Y.; Elizabeth, N.J.; Ellensburg, Wash.; Elmont, N.Y.; Essex Fells, N.J.; Evanston, Ill.; Floral Park, N.Y.; Franklin Square, N.Y.; Franklin Township, N.J.; Freeport, N.Y.; Garden City, N.Y.; Glen Rock, N.J.; Great Neck, N.Y.; Greenville, S.C.; Greenwich, Conn.; Hasbrouck Heights, N.J.; Hastings, N.Y.; Hempstead, N.Y.; Herndon, Pa.; Hershey, Pa.; Hillside, N.J.; Jackson, Ky.; Jericho, N.Y.; Lawrence, N.Y.; Lock Haven, Pa.; Long Beach, Calif.; Lower Merion Township, Pa.; Madison, N.J.; Mamaroneck, N.Y.; Manhasset, N.Y.; Mechanicsburg, Pa.; Middlebush, N.J.; Middletown, Pa.; Mifflintown, Pa.; Millburn, N.J.; Minneapolis, Minn.; Minot, N.D.; Montclair, N.J.; Montreal, Quebec, Canada; Mt. Carmel, Pa.; Mt. Union, Pa.; New Brunswick, N.J.; New Rochelle, N.Y.; New York, N.Y.; Newton, Mass.; Oak Ridge, Tenn.; Overton, Tex.; Passaic, N.J.; Peabody Demonstration School, Nashville, Tenn.; Pearl River, N.Y.; Pelham, N.Y.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Ore.; Richmond, Va.; Ridgewood, N.J.; Rochester, Minn.; Rochester, N.Y.; Roselle, N.J.; Rutherford, N.J.; Rye, N.Y.; Rye Neck, N.Y.; San Bernardino, Calif.; San Francisco, Calif.; Sandy Township, Pa.; Santa Barbara, Calif.; Scotch Plains, N.J.; Seattle, Wash.; Shamokin, Pa.; Shippensburg, Pa.; South Huntington, N.Y.; South Orange-Maplewood, N.J.; Stamford, Conn.; State College, Pa.; Steelton, Pa.; Suf-

<sup>1</sup> See footnote on page 5.

fern, N.Y.; Summit, N.J.; Tarrytown, N.Y.; Tenafly, N.J.; Turbotville, Pa.; Tyrone, Pa.; Van Port, Ore.; Wappingers Falls, N.Y.; Wayne Township, N.J.; Weehawken, N.J.; Westfield, N.J.; White Plains, N.Y.; Willingdon, Quebec, Canada; Williamsport, Pa.; Wilmington, Del.; Winnetka, Ill.; Yeagertown, Pa.

In so far as persons can be identified, the names of those observers whose reports have been drawn on and those teachers whose procedures have contributed to this volume are included in the following list. The inclusion of a person's name in this list does not, of course, imply his endorsement of every practice in this book as necessarily good.

<sup>2</sup> Katherine Aageson, Florence Abbott, Beatrice A. Ahrens, Eleanor M. Albee, Frances Albertis, Lucile Allard, Florence M. Anderson, Beatrice Apgar, Verna H. Ardery, Harriet H. Atwell.

Dorothy M. Bacheller, Ruth Backiel, Francis L. Bacon, Lillian Badesch, Hazel K. Bailey, Vivian B. Baird, Mary Baker, Ruth Baldwin, Clara S. Barber, Glenn L. Barnett, Paul F. Bartges, Alice L. Barth, Betty L. Barton, Blanche Baty, Eva Baty, Emma Beauseigneur, M. E. Bell, Elmer R. Beloof, Stanley E. Benham, Victor Bennett, Charlotte Bergner, Martha Berry, Florence M. Bigelow, Merrill A. Bigelow, Herbert Birch, Paul W. Bixby, Frances Black, Agatha A. Blondin, Kenneth Bloom, Lorna Fern Bloom, Sylvan T. Bloom, Bertha Armstrong Boles, Louise Bollinger, D. Richard Bowles, Josephine Bowman, Arthur H. Brandenburg, Sylvia Breth, Helen Brickell, Lila Bridenbaugh, Katherine E. Bridges, E. Frances Briggs, Alberta Brotherhood, Betty Brown, Mary E. Brown, Vance L. Broyles, Geraldine Buchanan, Emory A. Buffington, Margaret J. Burt, William Butler, C. C. Byerly, Margaret C. Byrnes, Catherine Byrod.

Martha C. Caccamo, Anna M. Cahaley, Gertrude Cain, Lily A. Carlstrom, Bessie W. Carnegie, William G. Carr, L. G. Carter, John W. Cavileer, J. Chase, Bessie M. Clark, Margaret B. Clark, Minnie Clark, G. M. Clarke, Walter Van Tilburg Clarke, Mary G. Close, Josephine Clothier, Ruth M. Colter, Marlin Colyer, Ethel Conover, Alice E. Cooke, Louisa R. Cornelius, Mary S. Cotter, Ida K. Cowder, Helen V. Cox, Mrs. R. P. Crawford, George A. Crotsley, Frances E. Culver, Jane Cummings, Margaret Cummins.

Samuel L. Daihl, Velva Diven Daihl, P. Dafard, Flora L. Dailey, Natalie Daly, Mary Daugherty, Myrtle T. Davidson, Dorothy Davies, Oliver C.

Davis, Lyman W. Davison, Ruth Lee Deavor, Irene V. Deichelmann, Madeline F. Denton, Charles T. Dieffenbach, Janet M. Dildine, Grace L. Dodge, Myron T. Doherty, Claire Donahue, Julia M. Donnelly, Elizabeth Donovan, Rena Dorfler, Mrs. Quay C. Driesler, S. Dubow, Mae D. Duerstein, Cleon A. Dunn, Helen M. Durgom.

H. Edler, Dorothy M. Edwards, Violet Ellis, Florine H. Elrey, Robert H. Emery, Sara E. Emhiek, Ruth F. Ensor, George Evancho, Dorothy T. Evans, Agnes Exler.

Anna L. Fairbairn, Martha Faust, Joseph M. Feinberg, Jules Felek, Margaret Ferree, E. Filker, Cleo S. Findley, Joseph M. Fineberg, Mildred L. Fisher, Elizabeth T. Fitzpatrick, Loretta M. Foohs, Loula P. Ford, Charles Foreman, Marie P. Frappolli, George L. B. Fraser, Helen Fraser, Helen D. Frederick, Grace C. Freeman, Barbara Freitag, Eileen Frey, Gladys S. Frick, Ruth A. Friday, Edna Froyd, Leo G. Fuchs, Ethlyn M. Fye.

Ralph P. Gallagher, C. E. Gannon, Anna L. Gardner, Mary M. Geiger, Gertrude George, S. K. Gibson, Robert W. Gingrich, Helen C. Glancy, Margaret Mae Glashan, Julie M. Gleason, Alice M. Gocher, Harriet Goldberg, Frances Goldstein, Jacob Gore, W. A. Gore, Shirley Gorelick, Helen B. Gover, Jean B. Grady, Donald E. Graff, W. H. Gratton, James Gray, Agnes Greeley, Emily M. Green, Gladys M. Greenman, James H. Groome, Irene M. Grubnick, Emilio L. Guerra, Flora A. Gunnerson, Janet Gustafson.

Mrs. Howard Haas, Isabel Haggerty, Blanche W. Hale, Carl Hamsher, Barbara Hahn, Ethel F. Hansen, Marion M. Hanson, M. Fox Haramija, George Harmance, Lillian D. Harrington, Edward M. Hayes, Gladys Hayner, Sadie Healey, Harry R. Henly, E. Adele Hepbron, R. A. Hermann, Florence Hetrick, A. M. Hill, Dorothy Hinkle, Loretta M. Hirshbeck, Edward Hochrein, G. Arthur Hodge, Rita H. Hogan, N. Holder, Keith G. Holt, Loraine Hoorer, Elizabeth Houghton, Elizabeth Howell, Elizabeth H. Hubach, Margaret Huntley, Arthur B. Hussey.

Charles Ingles, Florence Irwin.

Teresa B. Jehl, John J. Jenkins, Irene Johnson, Rachel S. A. Johnson, Dorothea M. Johnston, Ruth S. Johnston, Verre T. Johnston, Luella Jordan, Emily Judge.

Margaret Kaylor, Gertrude S. Keane, Margaret M. Kelly, Robert Kelly, Lillian Kennedy, Donald W. Kern, Lena J. Kessler, Florence Keys, L. M.

King, Theodora H. Kloha, Ralph H. Knettle, Daisy M. Knupp, Dorothy Kraft, Alice Kramer, Geneva Kramer, Lloyd V. Krueger, Jean Kunes.

Herbert F. Laise, Layle Lane, Genevieve Lanthier, Mildred M. Lay, I. Bert Levine, Dorothy Levy, Bertram L. Lewis, Catherine F. Lewis, Joseph Lightcap, Maynard W. Linn, Frederick Lobdell, Betty J. Lockington, Franklin W. Loeb, Agnes L. Long, Helen Halter Long, Jennie Loos, Shirley Low, Ethel Luidens, Mary Lutz.

Hilda Mack, Isobel E. Mackay, Frank Maiesky, Rita Maley, Lydia Malpezzi, Geraldine Mann, E. J. Mansell, Edith Marks, Arthur C. Maroney, Harold F. Martin, Mary F. Martin, Mona H. Martin, Agnes N. Mathews, Margaret E. Mathias, J. W. Maucker, Beulah Maus, Hazel McBride, D. J. McComb, Mary M. McCormack, Felix J. McCormick, Mary A. McCune, Margaret McDermott, Mildred McDermott, Elinor C. McDowell, Irene B. McGonigal, John P. McGuire, Connie McKnight, Joseph C. McLain, Alice R. McLaughlin, Grace McMahon, Dorothy McNulty, Evelyn P. Meeder, Deborah Melamed, Judith Melamed, Cecil D. Mellott, Esther A. Merrill, Anne Miller, Isabelle F. Minto, Dorothy Minton, Alys Mitchel, Viola Mitchell, Anna May Moore, Irwin F. Moore, R. Morgan, D. E. Morris, Asenath M. Mosso, Roy V. Mouer, Clifford L. Mozer, Vesta Mullin, Thomas W. Mulrooney, Florence E. Murphy, Eleanor Myers.

Gabriella Nase, Katherine E. Neff, Irene E. Nelson, Carl J. Nemetz, Frank A. Neubauer, Ruth W. Nichols, Ruth E. Nicholson, Arthur A. Northrop, Caroline E. Nourse.

Barbara N. O'Donahue, Anna C. O'Donnell, R. K. O'Malley, Margaret O'Mara, Julius W. Opheim, Nenah B. Ostrom, Alvah T. Otis.

M. E. Pacteau, B. W. Palmer, Katherine Park, F. S. Parker, Hilda I. Passarelli, Elizabeth L. Peebles, Albert S. Peeling, Ann. J. Petersen, Elinor H. Peterson, Elizabeth K. Peterson, Lillian T. Pierson, Gertrude B. Pingsree, Dina Di Pino, Martha S. Potter, Frances Presler.

Ruth B. Raby, Lillian C. Randolph, Paul T. Rankin, Ruth E. Rebuck, Edith S. Reque, Edward F. Reuther, C. Ivron Reynolds, Lora A. Ricer, Margaret Richards, Cleo Richardson, Joyce Rine, Evelyn J. Rizzo, Joseph Roach, John W. Robertson, Aline G. Robins, Miriam Davis Rohl, S. Rokosz, Earl B. Rosecrans, Dorothy E. Ross, Helen E. Ross, B. J. Roth, Ross O. Runnels, David H. Russell.

Peggy Sahloney, Marion R. Salisbury, Mrs. Earl Sallack, Eugenie C. Sands, O. W. Satterlee, Agnes Saunders, Mildred D. Schaughency, Ruth Schiesser, Roland D. Schlenker, Gertrude E. Schmohl, Samuel Schmuck-

ler, Muriel L. Schott, Mabel Y. Schriver, Frederick Scribner, Marie Scotti, Bessie R. Seeley, Myrtle A. Seeley, Francis Seldon, Marion K. Sengsmith, S. Robert Shapiro, Marion Shaw, Marguerite A. Shea, Ethel M. Sheldon, Eyca B. Shelley, Joseph S. Shelly, Helen E. Sherer, George W. Shively, Mary Siegel, Arthur W. Silliman, Robert J. Simpkins, Florence Simpson, Lu Lee Sims, Elizabeth V. Sinon, Sally E. Siscoe, Leon Sklar, Arlene Slootmaker, Arthur L. Smith, Carroll H. Smith, Donald E. Smith, Harry Smith, Hoyt D. Smith, Margaret B. Smith, Rebecca F. Smith, Sampson G. Smith, W. A. Smith, Blanch Snyder, Maycie Southall, Helen C. Spaid, Dorothy E. Spitko, Grace L. Stafford, John W. Stahl, Elizabeth Stant, Harold M. Starry, Edward Stasheff, Edna Staub, S. Brenton Stearns, Eleanor Steinbach, William N. Sternberg, Paul Stewart, Ethel Stiger, Naomi Stockman, Edward J. Storey, Robert Streeter, Muriel K. Sturtevant, Loretta L. Sullivan, Loyola Sullivan, Grace E. Swanson, Grace Swartz, Howard Swisher.

Meyer Tarlowe, H. C. Taylor, Lillian R. Taylor, Catherine Terracciano, R. Lee Thomas, Arvessa Thompson, Daisy Thompson, Eleanor Thompson, Florence Titman, Alice Tomb, Clyde M. Troutman.

John Urban, Florence E. Utter.

Richard F. Van Scyoc, Caroline B. Voorhis.

Gwendolyn Wagner, Otto J. Walrath, Alma V. Ward, Elizabeth Ward, Ethel V. Ward, Kathryn Waring, Charles L. Warren, Richard F. Washek, Marjorie S. Watts, Luther Weaver, Isabel F. Webber, Jessie Webber, Marion J. Webster, Marion Weeks, Ruth Wehmhoefer, F. P. Weidner, Mayneil M. Weldon, Charlotte Wells, Arlene Wenger, Mary A. Wert, Cleve O. Westby, Evelyn Westcott, Julia Wetherington, Lloyd B. Wheeler, Bertha Wheelock, Ruth M. Whitbread, Clarissa H. White, Belle Hayes Wiley, Naomi C. Wilhoit, Marjorie V. Wilkins, Dorothy Williams, Katherine Williams, Philip Wion, E. B. Woodard, Mary Ann Woodard, Brainard H. Woodward, William Woolfson, Marjorie L. Wright.

Frank Yeingst, Elizabeth Young, Gertrude Young, Jessie G. Young, William E. Young.

Virginia Zahn, Maude Zartman, Laura Zirbes.

## Supplement D: LIST OF VISUAL MATERIALS

The following list of visual materials can be used to supplement some of the material in this book. This list is a comprehensive rather than a selective list. Therefore, we would suggest that each film be previewed before using as some may contain information that is too advanced while others may contain information that is too elementary.

These films can be obtained from the producer or distributor listed with each title. (The addresses of producers and distributors are given at the end of the bibliography.) In many cases these films can be obtained from your local film library or local film distributor; also, many universities have large film libraries from which they can be borrowed.

The running time (min) or number of reels and whether it is silent (si) or sound (sd) are listed with each title. All of the motion pictures are 16-mm, black and white films.

### MOTION PICTURES

*Learning to Understand Children, Part 1* (McG-H 21 min sd). Study of an emotionally and socially maladjusted girl who, through diagnostic techniques, is given an understanding of her needs. \*

*Learning to Understand Children, Part 2* (McG-H 23 min sd). Reveals the plan for remedial action which utilizes procedures that may be used in dealing with many types of maladjustments.

*Maintaining Classroom Discipline* (McG-H 14 min sd). Explores the techniques for securing proper class conduct and attitudes.

*Broader Concept of Method, Part I* (McG-H 13 min sd). Presents a frank picture of the teacher-dominated lesson-hearing type of recitation, and shows typical effects of the method on student attitudes, responses, and learning.

*Broader Concept of Method, Part II* (McG-H 19 min sd). Depicts teachers and pupils planning and working together towards a mutual solution.

*The American Teacher* (MOT 2 reels sd). Presents the pros and cons of progressive education and points out to the American citizen his responsibility for the quality of education his community provides for its young.

*Assignment Tomorrow* (NEA 3 reels sd). Reveals how teachers work together to develop a healthier, happier, better informed young citizen for the future.

*A Better Tomorrow* (NYUFL 2 reels sd). Reveals the normal routine of schools, and how they are attempting to bring about a better tomorrow.

*Teaching* (VGF 2 reels sd). Covers the educational and training requirements for teaching, and shows the activities of teachers in a modern school.

*School* (FC 2 reels sd). Reveals the organization of a school pledged to develop self-reliance and good citizenship through self-government.

*We Plan Together* (TCCU 2 reels sd). Shows the methods used in a core class and the results of cooperation on the part of students and teachers.

*Tips for Teachers* (JHO 2 reels sd). Explains the place and value of the teacher's personality, dramatizes the importance of preparation and presentation.

*New Schools for Old* (MOT 10 min sd). Contrasts the little red school-house with the modern school.

*Principles of the Art and Science of Teaching* (IO 55 min sd). Depicts three basic principles of teaching utilized in the cooperative development of assignments.

*Pop Rings the Bell* (NSSInst 23 min sd). Shows the modern school at work.

*The Elementary School of Tomorrow* (ITTCO 12 min si). Shows a picture of progressive education in Greenbelt, Maryland.

*Willie and the Mouse* (TFC 11 min sd). A comparative study with mice and the educational implications for the classroom.

*We Go to School* (COR 1 reel sd). Teaches children what they can expect from school and what school expects from them.

*Making the Most of School* (COR 1 reel sd). Reveals to school children the infinite riches which school offers them.

*The New Way to Greater Education* (COR 2½ reels sd). Demonstrates how audio-visual teaching saves time in presenting ideas.

*Lessons for Living* (NFB 2 reels sd). Shows how a school project revitalizes a community by giving the children a part in community life.

*Design for Education* (SLC 2 reels sd). Presents progressive education techniques in a college for women.

*Let Your Child Help You* (NYUFL 1 reel sd). Shows how very young children may help at home and develop a sense of accomplishment and responsibility.

*Devil Is a Sissy* (COHR 2 reels sd). Depicts parent-child relationships and contrasts methods of handling children.

*The Jeanes Teacher and Her Work* (NYUFL 3 reels sd). Outlines the work of rural Negro schools in the South and how they can be improved.

*As Our Boyhood Is* (NYUFL 2 reels sd). Shows how much more needs to be done in Negro schools for preparation for life.

*And So They Live* (NYUFL 3 reels sd). Shows how the schools of a particular rural area attempt to prepare its youth and adults to work with the things available in their particular environment.

*Living and Learning in a Rural School* (NYUFL 2 reels sd). Presents the educational program of a New Jersey school by which children are taught to understand a community and to use the materials of its surroundings.

*Children Learn about Their Neighbors* (RFA sd). Shows the training techniques used with the primary children of Riverside Church school.

*Near Home* (INT 25 min sd). Reveals an appraisal of teaching techniques and the children who are part of it.

*Case of Mary Jones* (ILLED 18 min sd). Shows the forces of a strong teachers' association making its influence felt.

*Bringing the World to the Classroom* (EBF 20 min sd). Shows how instructional sound films can help teachers surmount obstacles in the learning process.

*Teachers at Work* (PSSC 20 min sd). Depicts light types of practices in the classroom.

*The Teacher as Observer and Guide* (TCCU 20 min sd). Shows the teacher's role in using five types of practice.

*Education for Citizenship* (MSSC 10 min sd). Gives extended treatment of procedures and resources in citizenship education.

*Learning Through Cooperative Planning* (TCCU 20 min sd). Shows how, through cooperative planning, the roles of teacher, pupil, and parent can be of mutual value to the entire school.

*Education Through Art and Home Economics* (TCCU sd). Reveals the role of art and home economics in preparing youth for life.

*Developing Leadership* (COR 1 reel sd). Shows principles to be employed in developing leadership of youth.

*A Guidance Problem for School and Home* (TCCU 2 reels sd). Depicts the role of guidance in school and home.

*A Way of Life* (IHC 1 reel sd). Reveals a better education for a community (Beavertown, Michigan) and how ideals and better living permeated the entire town.

*Safe Living at School* (COR 1 reel sd). Shows how, through proper safety habits in school, pupils can learn to utilize these habits for better living in the community.

*Ways to Good Habits* (COR 1 reel sd). Shows how children are developing the habits which they will have throughout their years.

*Life with Baby* (MOT 18 min sd). Reveals the psychological and clinical understanding needed for the young child.

*Shy Guy* (COR 13 min sd). Designed to treat the problem of shyness as it affects the adolescent.

*The Feeling of Hostility* (NFB 3 reels sd). Reveals the problem of a person outwardly successful but inwardly frustrated.

*The Feeling of Rejection*. (NFB 3 reels sd). Presents the case history of a person who learned in childhood not to risk disapproval.

*Children Learning by Experience* (BIS 32 min sd). A study of children as they go about absorbed in their own affairs, learning in their own way.

*Children Growing Up with Other People* (BIS 23 min sd). Shows the children's development towards individualism and cooperation.

*Let's Play Fair* (COR 1 reel sd). Stimulates discussion of "fair play" as it applies to specific problems in the everyday lives of youngsters.

*Whoever You Are* (NYUFL 2 reels sd). Reveals how a community on the West Side of New York City organized to relieve racial tension.

*Play Is Our Business* (NYUFL 2 reels sd). Depicts the work of the play schools in solving some of the community problems which affect children during after-school hours and vacations.

*A Day in the Life of a Five-year Old* (TCCU 20 min sd). Shows procedures and resources of a modern kindergarten.

*Make Way for Youth* (NYUFL 2 reels sd). Describes the development of a youth council in Madison, Wisconsin.

*Schools to the South* (NYUFL 2 reels sd). Gives an overview of educational programs in Central and South American schools.

*Wilson Dam School* (NYUFL 2 reels sd). Shows how a school's total program made provision for the mental, social, and physical development of its children.

*The Three A's* (BIS 20 min sd). Depicts the modern schools of England and methods employed in trying to solve her educational needs.

• *Schools in Cologne* (BIS 15 min sd). Shows the physical and human difficulties encountered in re-building the educational systems in war-ravaged Germany.

#### FILMSTRIPS

The following are all 35-mm filmstrips:

*The Teacher* (JHO 56 frames). Depicts the personal characteristics, appearance, bearing, habit, gestures, speech, and attitude of the professional teacher.

*Some Principles of Teaching* (JHO 56 frames). Gives suggestions as to how the teacher can help shorten the learning process.

*The Lesson Plan* (JHO 59 frames). Depicts the place and value of planned lessons in motivation, student participation, and assignments.

*Designing Examinations, Part 1* (JHO 44 frames). Shows the place of examinations and a discussion of the essay-type examination as a tool of teaching.

*Designing Examinations, Part 2* (JHO 59 frames). Continuation of discussion of examinations with emphasis on objective-type tests.

*Centralized School* (ACE 54 frames). Deals with the educational program and the activities of the modern consolidated school.

*Parochial School* (ACE 54 frames). Depicts the educational program and activities of a large metropolitan Catholic parochial school.

*One-teacher School* (ACE 57 frames). Depicts the educational program and activities in an up-to-date one-teacher school.

*The Slidefilm in Teaching* (YAF 46 frames). Depicts the nature, purpose, and use of filmstrip as an educational tool.

**RECORDINGS**

*Public Education Begins* (from *Growth of Democracy* series; 12-inch disk at 78 r.p.m.; record no. 4, side 2. Discusses compulsory education and its significance.

*American Public Schools* (from *This Is America* series; 16-inch disk at 33½ r.p.m.; 15 min.). Dramatizes the enthusiasm of an immigrant boy and his father for the advantages offered by the public schools of America.

**LIST OF PRODUCERS AND DISTRIBUTORS**

ACE—American Council on Education, 744 Jackson Place, Washington, D.C.

BIS—British Information Services, 30 Rockefeller Plaza, New York 20.

COHR—Committee on Human Relations, New York University Film Library, Washington Square, New York.

COR—Coronet Films, Coronet Building, Chicago 1, Illinois.

EBF—Encyclopaedia Britannica Films, 20 N. Wacker Dr., Chicago 6, Illinois.

FC—Film Center, 45 West 45 St., New York 19.

IFB—International Film Bureau, 84 E. Randolph St., Chicago 1, Illinois.

IHC—International Harvester Company, 180 N. Michigan Ave., Chicago, Illinois.

ILLED—Illinois Education Association, Springfield, Illinois.

IO—University of Iowa, Bureau of Visual Instruction, Iowa City, Iowa.

ITTCO—International Theatrical and Television Corp., 25 W. 45 St., New York.

JHO—Jam Handy Organization, 1775 Broadway, New York.

McG-H—McGraw-Hill Book Company, Inc., 330 W. 42 St., New York 18.

MOT—March of Time Films, 360 Lexington Ave., New York.

MSSC—Metropolitan School Study Council, 525 W. 120 St., New York 27.

NEA—National Education Association, 1201 16 St., N.W., Washington, D.C.

NFB—National Film Board of Canada, 1270 Avenue of the Americas, New York.

NSSInst—National School Service Institute, Palmer House, Chicago, Illinois.

NYUFL—New York University Film Library, Washington Square, New York.

OWI—Office of War Information, Washington, D.C.

PSSC—Pennsylvania School Study Council, State College, Pennsylvania.

RFA—Religious Film Association, 45 Astor Place, New York 3.

SLC—Sarah Lawrence College, Bronxville, New York.

TCCU—Teachers College, Columbia University, New York 27.

TFC—Teaching Film Custodians, 25 W. 43 St., New York 19.

USDA—United States Department of Agriculture, Washington, D.C.

VGF—Vocational Guidance Films, Inc., Des Moines 10, Iowa.

YAF—Young America Films, Inc., 18 E. 41 St., New York 17.



# INDEX

## A

Abilities test, activities as, 301  
Absentees, responsibility for helping, 151  
Accidents in laboratory, 334  
Achievement tests, 295  
    mathematics, 333  
    parent participation in scoring, 373  
Activities, exploratory, 225  
    specific, 23-24  
    student sponsored, 167  
Activity, useful, 98-99  
Adjustment, personality, 25-26, 59, 330  
Administration, objectives of, 21-30  
    problems of, 8-9  
Administrators, 389-390  
Advertising, 247  
    experience in, 116-117  
    study of 47  
Advertising material, home economics, 268  
After-school sports, organization of, 93  
Agriculture, experience in, 247  
    state school of, 247  
    training in, 101  
Aides, teachers', 106  
Aids for teaching, concrete, 258  
American customs, introducing in school, 124  
American Red Cross first aid, 298  
Animals, care of, 176  
    harmful, 80  
    for science, 176, 177  
Answers, estimated, 312  
Appreciation, art, 42-43, 119-121  
    literature, 42-43  
    music, 42-43  
Aptitude analysis, 305  
Aptitude tests, 225  
Aptitudes, developing, 23-24  
    individual, 23-24  
Architects, local, 288  
Architecture, local church, 288  
Arithmetic, need of refresher courses in, 326  
    (See also Mathematics)  
*Army Reader, The*, use of, 329  
Art, 110-111, 115, 116, 235, 345-346, 387

Art, and English course, 345  
    appreciation of, 119-121  
    at home, 366  
    commercial, 116  
    courses in, 240  
    creative, 217  
Art club, activities of, 286  
Art crafts, 212  
Art education specialist, 9  
Art equipment, 110  
Art materials at home, 366-367  
Art show, students', 230  
Art work, 230  
Arts and crafts club, 215  
Assembly, foreign language, 220  
    French language, 220  
    school, 158, 196, 201  
    student run, 195, 196  
Assembly programs, 86, 196  
    intercultural, 197  
Astronomer, community, 284  
Astronomy, science of, 181  
Attendance, motivating, 48  
Attendance officer, 362  
Attitudes, development of, 97-98  
Audiometer, 57  
Audio-visual aids, 41, 283-284  
    student operators of, 267  
Authority, exercise of pupil, 148-149  
Autobiography, 303  
Auto mechanics, 88, 82  
Autograph collecting, 283

## B

Ballet, 209  
Band, music for, 208  
    self-government of, 163  
Banking, experience in, 117  
Basic knowledge, 21-23  
Basic skills, teaching of, 21-23, 335  
Behavior, social, 81, 90  
Behavior problems, 56, 62-65, 77, 88, 159, 374  
Bibliography, student committees on, 267  
Binet test, 295  
Biology, displays and identification in, 53  
    motivating study of, 53  
    vocational, 343  
Biology club, 343

Bird study, 173, 175  
kindergarten, 338

Bird-food tree, 175-176

Board of education, 383

Boat club, 236

Book exhibit, 369-370

Bookmaking, in kindergarten, 315  
by pupils, 229

Book reviewers, student, 162-163

Books, abandoned, 264  
reviewing, 102  
student reviewers of, 162-163

Bowling club, 94

Box band, 211

Boy-girl relations, 81

Boy and Girl Scouts, 377

Brain-teasers in mathematics, 340

Budget, student sponsored, 167

Building, planning for, 165

Building survey, school, 184

Bulletin board, 36, 45, 52-53  
citizenship, 155  
mathematics, 179  
music, 45  
newspaper, 43-44  
pupils', 153, 229  
social studies, 266  
use of, 50-51

Business experience, 115-117

Business law, 144

Business training, 99-101, 104, 108, 110-112, 115-117, 141, 142

Business-education teacher, 248

Businessmen, cooperation with (*see* Community, coordination with)

## C

Cafeteria committee, 162

Cafeteria management by pupils, 107

Calendar, school, 244

Calories, 131

Camp for teachers, 392

Campaign, community, 198

Camping, 86

Card-index file, 267

Cartoons, as social studies, 63

Changes in schools, causes of, 13-16

Character building, 25-27, 47-48, 61, 83-95, 98-99, 101, 105, 148, 155, 162, 357-358

Charades, as vocabulary help, 313

Checkup committee, responsibility of, 149

Chemistry, advanced course in, 344  
cooperation in, with colleges, 344-345  
experiments in, 254, 344

Chemistry laboratory, 344

Chemistry projects, special, 254

Child care, 109, 111-112, 140-141

Child-care Committee, 111

China, study of, 76-77

Choir direction, community, 285

Choreography (*see* Dance)

Christmas, 193

Christmas activities, 215

Christmas decoration, 212

Church architecture, local, 288

Church history, 287

Churches, trips to, 283

Citizenship, 26-27, 98-99, 101, 119-121, 185  
development for, 83-95, 357-358  
education in, 6  
experience in, 258  
practice in, 148-149  
self-evaluation in, 155  
study as aid to, 347  
training in, 193, 199-200  
world, 135

Citizenship club, 49-50, 132-133, 156, 193

City government, 144, 280

City resources, 280

Civics program, 287

Civil Service Course, 244

Class hosts and hostesses, 231

Classes for socially maladjusted, 328-329

Cleanliness experiment, 172

Clerical assistance, 392

Club trips, 183

Club-activity program, 236, 344

Clubs, 49, 66, 67, 75, 76, 94, 109, 113, 132-133, 137-138, 156, 176, 180, 183, 202, 219-220, 236  
bowling, 94  
chefs, 242  
communications, 343  
law, 251  
library, 162  
luncheon, 151  
programs for, 244  
service, 108  
Summer gardener, 234  
Writing, 213

Coaches, student, 93-94

Colds, control of, 128-129

Collateral reading, motivating, 52

College-certification standards, 364  
College conference, 250  
Color experiments, 218  
Commercial activities, 117-118  
Commercial students, trips for, 289  
Committee techniques, 192  
Committee work, recognition of, 197  
value of, 192  
Committees, 192  
courtesy, 152  
student, 151-153, 158-159, 162-164, 267, 288  
Communications club, 343  
Community, activities in, study of, 39  
business offices in, 289  
coordination, of departments in, 103  
of schools with, 87, 115, 116, 139, 369  
educational resources of, 273  
industries in, 284  
interest in schools of, 387  
model of, 127  
norms in, establishment of, 305  
observation of, 176-177  
as one world, 273  
points of interest in, 278  
Community book, social studies, 281  
Community citizenship, guided experience in, 258, 271  
Community cooperation, 195  
in local bookmaking, 262  
Community drives, 380  
Community garden club, 176  
Community house, 379  
Community knowledge, promotion of, 286  
Community organizer, 377  
Community participation, 102, 107, 108, 165, 202, 251, 254, 285  
of students, 136-137, 164, 202  
Community personnel, 274  
Community problems, study of, 281  
Community relations, 107  
Community resources, 258  
Community study, 183-184  
of water-supply system, 151  
Community travelers, 277  
Community-centered schools, 273  
Community-service work, 86  
Composition (*see* Writing)  
Conference, college, 250-251  
Conference method, 352  
Conferences, 307  
individual, 296  
Conferences, home-visitor, 362  
parent, 158, 299, 300, 362  
pupil, parent, teacher, principal, 158  
report card, 362  
teacher-principal, on individual progress, 299  
Consumer education, 130, 139  
Conversation, 134-135  
Cookery for boys, 79  
Cooking, 123  
Cooperation, 87-88, 107, 118, 148-149, 213  
with Civil Aeronautics Authority, 111  
with community, 29-30, 144  
by compromise, 189  
developing, 90-91  
with home, 372  
pupil, 109, 116  
school-home, 374  
techniques of, 189  
training in, 189  
at various age levels, 156  
Cooperative service, English, science, social studies, 398  
Cooperative chemistry test for college students, 34-35  
Coordinating agencies and resources, 83, 357-399  
Coordination with the home (*see* Home)  
Coordinator, reading, 391  
Correlation, 103, 143  
of English and social studies, 52  
Correlation project, time schedule for, 398  
Corridor exhibits, 44, 52, 230  
Costume designing, 115-116, 133  
Costume room, rents, 370  
Costume wardrobe, 102  
Counseling, 56  
County fair, 86  
Courses, introducing, 242  
Courses, interviews on, selection of, 373  
parent participation in, 373  
Court, student, 199  
students at, 284  
study of, 139  
visits to, 251  
Courtesy, 61, 67, 87-88, 103, 152, 157, 161, 231, 367  
in first grade, 372  
Crafts, 41, 87, 132, 156, 233, 241, 249  
(*See also* Arts and crafts club)  
Creative activity, motivation of, 37-39, 42-43, 46, 48-49

Creative dance program, 217  
 Creative guidance, 204-205  
 Creative science, 204-205  
 Creative work, 345  
 Crime prevention, 52  
 Current events, 132-133, 142, 201  
 Current issues, 48, 266  
     discussion of, 50, 52  
 Current-events panel, 159  
 Curriculum improvement, pupil participation in, 78-79

## D

Dance, 89  
     modern, 216  
 Dancing, interpretative, 216  
 Debating, 52  
 Decimals, 266  
 Decorations, holiday, 110  
 Defects, physical, 299  
 Democracy, in action, 148-149  
     problems of, 287  
     training in, 192  
 Democratic group action, 167  
 Democratic living, 86  
 Demonstration nursery school, 371  
 Dental health, 298  
     classes for parents in, 299  
     follow-up, 299  
 Dentists, cooperation with, 381  
 Department-store experience, 254  
 Developmental Practices, 33, 98-223  
 Devices, for corridor displays, 44  
     diagnostic, 297  
     for drill, 309  
     for geography, 44-45  
     for lantern-slide drill, 310  
     motivational, 43, 48-49, 265  
     for nature study, 46  
     for securing interest, 72  
     for social studies, 44-45  
 Diagnosis, individual, 291-292  
 Dictionary game, 318  
 Difficulties, hearing, 57  
     learning, 58, 60, 63-64, 66  
     physical, 58, 390  
     pupil, 361  
     sight, 57  
 Direct-method teaching, 145  
 Directions, ability to follow, 319  
 Discipline, 56, 196  
 Discussion, leaders in, 44  
     music, 214  
     organization of class, 49-50, 52

Discussion, responsibility for, 154  
     rules for, 154  
     student motivated, 157  
 Discussion groups, 194  
     parent-teacher, 365  
 Discussion Sheets, 365  
 Discussions, 37, 44, 106, 133, 380  
     motivation of class, 50-51  
 Disease chart, 298  
 Diseases, contagious, 365  
 Display (*see Exhibit*)  
 Display case, 53  
 Doctors, talks on sex education by, 287  
 Dramatic activities, 66, 124, 131-132, 145  
 Dramatic literature, 223  
 Dramatic recordings, use of, 269  
 Dramatics club, 220  
 Dramatizations, 74, 211  
     at culmination of units, 372-373  
     costumes for, 370  
     in elementary sound studies, 42-43  
     informal, 210  
     of law problems, 144  
     safety, 74  
     in schools, 102, 131-132, 145, 345  
     student coached, 338  
 Drawing, mechanical, 111  
     therapeutic, 59, 63-64  
 Drill, individualized, 309  
     new methods superseding, 310  
 Duty and responsibility, 105

## E

Eating habits, training in, 76, 128, 131  
 Education, distributive program in, 253  
     influence of, 17  
     liberal, 98-99  
     modern, 17, 33  
     philosophy of, 4  
     special, 37, 55, 56  
 Education association, 380  
 Educational design, 37  
 Educational objectives, major, 17  
 Educational Policies Commission, 3  
 Educational practice, modern, 33  
 Educational psychology, 13-16  
 Educational Records Bureau, scoring by, 304  
 Educational specialist, 9-10  
 Educational specialties, 9-10  
 Educational technology, 15-16  
 Egg timer, use of, in drill, 316

Election, pupil participation in, 136-137  
Elections, student, 137-138, 160  
study of, 143  
Electives, elementary school, 234  
Electric buzzer, activating principles of, 170-172  
Electronics, 343  
Elementary education (*see* Grade levels)  
Elementary school, electives in, 234  
Emergency room, 164  
English, 145, 146, 303  
and art course, 345  
class in, 283  
composition course in, problems of, 48-49, 303  
corrections in, by conference, 352  
fairy tales in, use of, 41  
library laboratory work in, 355  
mechanical terms in, 68  
scholarship courses in, 342  
and science, 398  
scientific, 348  
service classes in, 328  
shop, 68  
and social studies, coordination of, 52  
project for, 398  
Enriched language, study of, 243  
Enriched program, dramatics, poetry, music, 336  
Enriched teaching, resources and facilities for, 336  
Entertainments, interclass, 154  
parent sponsored, 371  
Equipment, 119-121, 263  
designing, 219  
for handwork, 233  
making, 107, 109  
weather-station, 238  
for wind-tunnel model, 187  
(*See also* Materials)  
Etiquette, 81, 89, 90, 134-135  
Etiquette drill, 317  
Examinations, 79  
(*See also* Tests)  
Exchange, The, 3  
Exchange students, 165, 274  
Exhibits, 36  
community artists, 286  
corridor, 230  
garden, 234  
Japanese, 93  
music, 267  
painting, 268  
of science models, 221  
Exhibits, of work at culmination of units, 372  
Experience, agricultural, 232, 234  
productive, 98-99  
social, 231  
variety of, 225, 258  
Experience themes, 303  
Experiments in biological science, 343-344  
Exploratory activities, 225  
Expression, creative, 203  
Extra classes, outside school hours, 242  
Extra work, 235  
Extracurricular activities, 67, 83, 92-94, 108, 132-133, 387, 395  
ratings on, 160  
of teachers, 274  
Eye defects, 299

**F**

Fact drill, 322  
Faculty committee for exceptional students, 341  
Fair, international, 87  
Fairy tales, 41  
Farm school, for personality adjustment, 330  
Farm-school program, 232  
for summer, 232-233  
Farmwork program, 247  
Fashion design, 253  
Father's Day, 383  
Federal Communications Commission test, 253  
Field day, 87-88  
Field trips, 173  
Filing systems, student, 269  
Film critic's club, 180  
Film slides, foreign-language drill, 323  
Films, use of, 393  
Financial responsibility, 155  
First aid, 124, 364  
First grade, group reading, 338  
organization of, 396  
party for, 372  
programs of, for parents, 372  
Flower show, 231  
Folk dances, 89  
Food, 101, 131  
Football, 91  
Foreign languages, drill in, 323  
study of, 145, 243  
use of film slides in, 323

Foreign languages, study of, using news-papers in, 243  
 in primary grades, 232  
 vocabulary building in, 52-53

Foreign pupils, 59, 124-125

Foreign recordings, use of, 145

Foreign-language arts, 240

Foreign-language periodicals, 268

Forum discussion, 196

Forums, 132-133, 197, 380-381  
 interschool, 202  
 student, 49-50

Fourth-grade program, for kindergarten, 338

Fraction cards, 320

Fractions, 266

Fund-raising campaign, 198

Furniture, fixed, 36, 395-396  
 movable, 36, 395-396  
 refinishing, 241  
 study of, 285

**G**

Games, 200, 313, 316-318, 321, 322  
 foreign language, 232

fraction card, 320

program for, 91, 92

spelling, 318

vocabulary-development, 313

with magazines, 262

supervised, 91

Garden club, 176

Garden exhibit, 234

Gardeners, student, 234  
 summer, 234

Gardening, community participation in, 109  
 landscape, 109

Gardens, 106

Gear model, 269

Generosity, 61

Geography, 44-45, 78, 80  
 equipment for, 129  
 laboratory for, 129  
 map-making for, 129  
 motivation of, 73  
 study of, 73, 76, 133-135

Glee clubs, 219-220

Government (*see Local government*)

Government pamphlets, 268

Grade-advisers, 397

Grade classification, 62

Grade levels, all ages, 57-59, 72-75, 86-88, 99-104, 149-153, 192-193, 205-208, 228-231, 259-263, 275-277, 293-301, 310-315, 328, 336-338, 359-371, 377-384, 390-396

lower grades, 37-44, 59-62, 75-78, 88-92, 104-105, 121-128, 153-156, 170-177, 193-195, 208-213, 231-234, 263-265, 278-280, 301-302, 315-319, 328-329, 338-339, 349-351, 371-372, 384-386, 396-397

middle grades, 40-47, 62-65, 75-80, 88-93, 104-109, 128-137, 153-160, 174-181, 195-197, 209-216, 231-238, 263-268, 278-284, 301-304, 317-324, 328-330, 339-341, 349-353, 372-373, 384-386

junior high school, 42-51, 62-68, 78-82, 92-95, 105-115, 128-141, 156-167, 176-188, 195-201, 213-220, 231-250, 265-271, 279-288, 301-307, 319-324, 328-333, 339-342, 351-356, 373-374, 386-388, 397-399

senior high school, 47-53, 78-82, 93-95, 109-118, 137-146, 160-167, 179-188, 195-202, 215-223, 236-255, 266-271, 283-289, 302-307, 321-324, 330-333, 341-346, 351-356, 386-388, 397-399

Grade meetings, parent-teacher, 365

Graphs, making of, 179, 321  
 use of, in self-evaluation, 302

Group action, cooperative, 189

Group discussion, 157, 194, 342

Group enterprises, for low-intelligence children, 237  
 for superior children, 336

Group meetings, senior seminar, 342

Group morale, 49-50, 62-63

Group singing, 207

Group work, 127, 228, 235  
 for handicapped, special courses in, 326  
 in reading, first-grade superior children, 338

Grouping, within class, 52, 314  
 across grade lines, remedial reading, 328  
 for junior- and senior-high-school mathematics, 332-333

for mathematics drill, 320

for responsibility, 328

Grouping, by social maturity, 328-329  
for vestibule classes, 328  
Guest speakers, 52  
Guidance, 49, 55-68, 77, 81, 90-91, 114, 119-121, 235, 287, 293, 305, 307, 330, 386, 391  
creative, 204-205  
in judgment-forming, 169-170  
low intelligence, 237  
in reading, 391  
in successful living, 239  
Guidance counselor, 25-26, 66, 304, 397  
Guidance director, 342  
Guidance programs, 373  
Guidance specialist, 9, 299  
Gymnasium, leadership in, 157

**H**

Handicaps, mental, classes for, 326  
physical, 66  
classes for, 326  
Handwork program, 233  
Health, 86, 126-128, 164  
dental, 298, 368  
physical, 298, 368  
and safety, 27-28, 79, 123, 124, 128, 136, 161, 172, 364, 365, 381  
attitudes and habits for, 27-28  
demonstration of, 172  
washroom signs promoting, 45  
Health conferences, individual, 366  
Health meetings, general, 366  
Hearing defects, 299  
High school (*see* Grade levels)  
History, American, 41-42, 132, 265  
correlation of, with music, 178  
local, 282  
radio program on, 321  
History drill, 313-314, 321  
History-scholarship courses, 342  
Hobbies, 203-204  
Hobby assembly, 229  
Hobby groups, 228-229  
Holiday decorations, 110  
Holiday guide, 367  
Home, coordination with, 79-80, 117, 136, 137, 140, 357, 369  
Home arts, 79-80, 110-112, 114-117, 123, 133, 137, 140-141  
for boys, 79  
Home canning, 79  
Home discussions, 40, 44

Home duties, responsibilities, 358  
Home economics, 67, 186-187  
(*See also* Home arts)  
advertising material for, 268  
bulletins on, 268  
Home furnishing, 285  
Home interests, 121  
Home living, improvement of, 367-368  
Home mechanics for girls, 243  
Home reports, 363  
Home survey, vocational agriculture, 302  
Home vocational training, 117  
Home-economics library, 268  
Home-economics living room, 246  
Homemaking, 124  
Homeroom, 92  
Homeroom guidance, 397  
Homeroom mothers, 368  
Home-visitor conferences, 362  
Homework, radio assignments, 50  
Homes, study of, 371  
Honesty, cultivating, 60-61, 89  
Hospital laboratory techniques, 251  
"How to study" classes, 348  
How to use this book, 6-9  
Human relations, 49-50, 55, 59, 61-63, 65-68, 74, 114, 165, 393  
between pupil and teacher, 55, 73, 74  
(*See also* Intergroup relations)  
Humane week, pet show, 230  
Hygienist, school, 298

**I**

Imagination, stimulating, 48-49  
Index, use of, 8, 319  
Indian weaving, 24  
Individual adjustment, 55  
Individual conferences, 40  
Individual diagnosis, 33, 55-68, 291  
Individual development, 33, 55-68, 291-356  
Individual differences, planning for, 131-132, 341  
Individual enterprises, superior children, 336  
Individual practices, 33, 291-356  
Industrial arts, 235  
Industrial arts laboratory, 249  
Industrial education specialist, 9  
Industrial plants and offices, visits to, 251  
Industries, community, 284  
Industry, cooperation with (*see* Community coordination)

Infant care, 140  
 Insects, science, 178  
 Insight, 258  
 Insights, psychological and social, 13-15  
 Institutes, 393  
     for teachers and parents, 394  
 Instructional materials, 43, 44  
 Insurance, accident, 247  
     on loan exhibit, 286  
     talks on, by local agent, 285  
 Intelligence tests, parent participation in scoring, 373  
 Intercultural relations, 124-125, 197  
 Intercultural-relations unit, 283  
 Intergroup games, 87  
 Intergroup relations, 50-51, 65, 87, 106, 114  
     (See also Human relations)  
 Interior decoration, 110  
 International-affairs club, 288  
 Interscholastic sports, 93, 94  
 Interschool enrollments, 333  
 Intramural games, 92, 93  
 Interracial understanding, 196  
 Interest, 35, 69-70, 75, 77-78  
     measuring, 70  
     as motivation, 310  
 Interschool planning, 201  
 Introducing new study, 36, 50-51, 76-78  
 Investigation, active, 169  
*Iowa Basic Skills* test, 328  
 Italian-American workshop, 289

## J

Japan, study of, 43  
 Japanese exhibit, 43  
 Journalism, 43, 72-73, 102, 238, 250, 270, 383  
     (See also Newspapers)  
 Judgment, tests of, 292  
 Junior high schools (see Grade levels)  
 Juvenile delinquency, 49-50, 52, 83

## K

Kindergarten, bookmaking in, 315  
     introduction to, 61  
     picture signatures in, 397  
     pupil aides in, 338  
     teacher visits to, 396  
     (See also Grade levels)  
 Knitting, 107

Knowledge, basic, 21-23, 325  
     in relation to use of skills, 23-24  
     (See also Skills)  
 Kuhlman-Anderson test, 295

## L

Laboratory, classroom as, 121  
     English, 119-121  
     mathematics, 119-121  
     science, 130  
     social-studies, 119-121  
     whole school as, 121  
 Laboratory methods, comparison of, with real life activities, 119-121  
 Laboratory techniques, 251  
 Language course, exploratory, 240  
 Language recordings, use of, 145  
 Language study, 82, 145  
 Lantern-slide drill, 310  
 Lantern slides, making of, 265  
 Lapidary work, 241  
 Latin, 82  
     film slides, drill in, 323  
     need of refresher course in, 326  
 Law club, 251  
 Leadership, 301  
     training for, 49-50, 64-65, 89-90, 92-94, 105-108, 198, 200, 332  
 Leadership testing, 296  
 Learning, efficient, 98-99  
     from individual experiences, 292  
 Leaves for teachers, 389  
 Letter writing, 73, 77, 78, 107, 131, 133-134, 146, 283  
     in English class, 303  
     social, 134-135  
 Letters, overseas, 283  
     to parents, 361, 372  
     student exchange of, 279-280  
 Levels of ability, in science unit, 341  
 Library, 235  
     books in, 40  
     display of book lists in, 46-47  
     home-economics, 268  
     parents', 366, 369  
     picture, 28  
     professional, 394  
     pupil participation in, 47, 112-113  
     toy lending, 90  
     use of, 355  
 Library club, 162  
 Library committee, 47  
 Library corner, 36

Library laboratory, 355  
Library room, equipment of, 40  
  school reading lists in, 46  
  use of, 40  
Library talks, 355  
Library specialist, 9  
Library tools for study, 348  
Lighting for dramatization, 113  
Lighting survey, school, 184-185  
Linoleum-block cutting, 247  
Literature, contemporary, 270  
  dramatic, 222  
  social-problem, 52  
Loan fund, student, 395  
Local book, making of, 262  
Local government, 387  
  project in, 286  
  study of, 143, 144  
  for teachers, 393  
Local political meeting, 288  
Low-intelligence group, 237  
Lunch hour, 88, 91  
Lunches, school, 371  
Lunch-hour program, 80, 88-91, 151  
Lunchroom committee, 162  
Lunchroom program, 161

## M

Machine shop, 249  
Machinery designing, 219  
Magazines (*see* Periodicals)  
Mailing list, 381  
"Main street" norms, 305  
Maladjustment (*see* Guidance)  
Manager, general, 163  
Map, papier-mâché, 265  
  relief (homemade), 265  
Map reading, 332  
Map-making, 129, 265  
Mass teaching, 291  
Matching activities to students, 39, 66,  
  70  
Matching presentation to pupils, 36  
Materials, cost of, 259  
  different levels of difficulty in, 257-  
  258  
  and equipment, 119-121, 129, 310  
  for globe, 261  
  for periodicals, 259  
  for pictures and post cards, 261  
  for science, 174  
  for teaching, printed, 257-258

Mathematics, 22, 106-107, 266  
  activities in, 99-101, 104, 106-107,  
  130, 135-136, 332, 346  
bread-and-butter, 331  
check-tests in, 302  
community problems in, 135-136  
courses related to, 245  
elementary principles of aeronautics,  
  science in, 332  
experiments in, 180  
"fraction cards," use in, 320  
graph-making in, 321  
grouping in, according to ability, 333  
and income-tax returns, 332  
independent work in, 320  
investigation in, 170  
measurement study in, 173, 177, 178,  
  182, 312, 322  
measuring instruments for use in, 245  
original problems in, 322  
in paint project, 178  
refresher, 333  
remedial tests in, 306  
schedules and graphs for, 321  
service classes in, 326  
short cuts in, 340  
slide rule, use in, 319  
small work group in, 314  
student aides in, 314  
study of community budgets in, 332  
surveyor's transit in, 182  
tests in, 305  
tricks for securing interest in, 339  
uses of, 179  
vocational, 269  
window-shade drill in, 315  
  (*See also* Num<sup>k</sup>. - work)  
Mathematics bullet board, 179  
Mathematics chart, 301  
Mathematics club, 346  
Mathematics drill, 310  
Measurement (*see* Mathematics)  
Measurements, estimating, 312  
Meetings, clubs and groups, 379, 383  
Merchandise fair, 252  
Merchants, participation, 252  
Metal crafts, 241  
Methods, changes in, 13-18  
Metropolitan school study course, 3  
Micrometers, 266  
Ministers, local, help of, 287  
Model building for non-reader, 330  
Model making, 236  
Models, 269

Modern-dance club, 216  
 Modern education (*see* Education)  
 Money raising, students, 153  
 Morale, student, 159  
 Motion-picture club, 218  
 Motion pictures, 88  
     for occupational course, 251  
     foreign, 145  
     judging, 186  
     in school, 382  
     study of, 186  
     in theatres, 380  
 Motivation, 35, 43, 104  
 Motivation position, 33, 35-95  
 Motivational devices, 43, 48-49, 265  
 Museum, school, 278, 282  
 Museums, 43, 44  
 Music, 45, 77, 80, 88, 93, 229, 235, 289, 396  
     appreciation of, 93, 214  
     ballads, 222  
     ballet, 210  
     band, 163, 208  
     bottlephone, 211  
     box band, 211  
     community, 384, 387  
     correlation of, with history, 178  
     dramatizing, 211  
     ear-training in, 216  
     group, 207  
     house, 396  
     instrumental, 207  
     listening to, 216  
     primary, 89  
     record work in, 230  
     recordings, foreign language, in, 242  
     terms in, 211  
     therapeutic, 59, 60  
     vocal, 219  
     xylophone, 214  
 Music bulletin board, 45  
 Music exhibit, 267  
 Music teachers, 88  
 Musical instruments, making of, 214  
*My Weekly Reader* test, 328

## N

National Council of Social Studies, basic list of names and dates in American history, 313  
 National elections, political, 144  
 National norms, 305  
 Nature study, 77-78, 176

Negro contributions, 196  
 Negro exhibit, 196  
 New pupil, introducing, 103  
 New York State study, 3  
 Newspaper, bulletin board, 43-44  
     class and school, 238  
     community, 383  
     foreign language, 243  
     Italian-American, 289  
     school, 72, 247  
     talks by editor of, 285  
     use of, in problems of democracy, 51  
 Newspaper work, 238  
 Newspaper writing (*see* Journalism)  
 Newspapers, comparison of, 270  
 Nonreader, activity for, 330  
 Number-tricks books in mathematics, 340  
 Number work, 125, 264  
     use of lantern slides in, 312  
 Nurse, school, 298, 368  
     visiting, 362, 371  
 Nursery school demonstration, 371  
 Nursing, 140  
     experience in, 112  
     home, 140  
 Nursing service, 112  
 Nutrition fee, 371

## O

Objectives, administration, 21-30  
     teaching, 21-30  
 Observation, 293  
 Observer, teacher as, 56, 70, 84  
 Occupational information, 251  
 Office practice, 142  
     "101 Book," 3  
 Open house, 86  
 Open-book tests, 353  
 Opera, Italian, 289  
 Opportunity groups, 228  
 Organization, first grade, 396  
 Organizing facts and ideas, 352  
 Orientation booklets, 359  
 Orientation courses, 226  
 Otis test, 295  
 Outside speakers (*see* Speakers)

## P

P.T.A. (*see* Parent-teacher Association)  
 Painting project, mathematics, 178  
 Paintings, exhibition of, 263

Paintings, reproductions of, 263  
Panel, current events, 159  
Panel discussions, 286  
Pantomime, 210  
Paragraph headings, use of, 349  
Parent conference, 300, 357, 362  
Parent-helpers, catalogue of, 275  
Parent-sponsored entertainments, 371  
Parent talents, 278  
Parent-teacher and school-board association, 103-104, 278, 295, 359, 364, 377, 385-386, 394  
in conference, 295, 364  
in fund raising, 103-104  
in library committee, 369  
in meetings, class, 365  
in periodical subscriptions, 259  
Parent visits, 369  
Parents, attendance of, at culmination of units, 372  
catalogue of pictures by, 370  
school recordings by, 370  
in cooperation with individual pupils, 357-359  
and costume room, 370  
and hobby clubs, 278  
questionnaire for, 295  
as source for augmenting school services, 358-359  
teaching of, 384  
and travel (*see* Community travelers)  
and visual education committee, 370  
welcome of new, to community, 359  
Parents' Association and sex education, 287  
Parents' Room, 382  
Pennsylvania School Study Council, 3  
Percentage, teaching of, 22  
Performance, test of, 303  
Periodical literature, 355  
Periodicals, 259, 262  
community contributions to, 266, 268  
current, 270  
evaluating, 185  
foreign language, 268  
professional, 394  
room in library for, 264  
science, 270  
Personality, 148  
cultivation of, 67-68  
development of, 25-26, 245, 296, 327  
rating chart for, 297  
study of, 47-48  
(*See also* character building)

Pet show, 230  
Pets, animals, 39  
writing about, 39  
Philosophy of education, 4-6  
Philosophy class, 252  
Photographs, local, 280  
Photography, 246  
Physical difficulties, 66  
hearing, 57  
sight, 57  
(*See also* Handicaps)  
Physical education, 89, 91, 391  
Physical education and athletics, 83-95  
Physical fitness, base score in, 306  
test of, 306  
Physical handicaps, 66  
Physical-education teachers, 88, 298  
Physics, 175  
automobile study and, 82  
concepts of, 187  
experiments in, 187  
light measurements in, 187  
Physics apparatus, tests with, 304  
Picture library, 261  
Pictures in remedial work, 328  
Pioneers, 41, 132  
Placement, vocational, 399  
Plant table, 231  
Plants, 176  
growing, 231-232  
growing table for, 175  
harmful, 80  
raising, 106, 109  
Play store, 125  
Playing-cards device for teaching atomic structure, 271  
Poetry appreciation, 46, 239  
Poetry broadsides, 3  
Poetry choir, 207  
Play program, 92  
Post office, school, 77  
Post-office visit, 279  
Poster making, 110  
Posttesting and pretesting, 293  
Practices, adapting, to circumstances, 4-5  
administrative implications of, 8-9  
classification of, 8  
description of, 6-7, 16-17  
discussion of, 4-5, 7  
for basic knowledge, 22-23, 33  
for basic skills, 22-23, 33  
how to use, 23-25  
invention of, 15-16

Practices, purposes of, 5-6  
 "Reasons Why," 7  
 related to objectives, 5-6  
 as teaching tools, 14-16  
 Preschool children, introducing, 61-62  
 Pretests, for background, world history, 308  
 general, 302  
 Primary grades (*see* Grade levels)  
 Primers, homemade, 263  
 Print shop, 246  
 Problem children (*see* Guidance)  
 Problem solving (*see* Thinking)  
 Productive experience, 98-99, 121  
 Profile of test results, 304  
 Programs, 158  
 Programs, international affairs club, 289  
 for parents, first-grade, 372  
 Propaganda, study of, 142-143  
 Psychological corporation, scoring by, 304  
 Psychological guides, 14, 401-404  
 Psychological principles, 401-404  
 by application to practices, 38, 58, 71, 85, 100, 122, 150, 171, 191, 206, 227, 260, 276, 294, 311, 327, 337, 360, 378  
 use of, in this book, 14  
 Psychologist, school, 295, 299, 300, 305, 371  
 Psychometry as specialty, 9  
 Public, attitude of, toward schools, 29-30  
 Public address system, 231  
 Public interest in schools (*see* Community; Home)  
 Public participation in school improvement, 29-30  
 Public relations, 86, 165, 286  
 parent and school, 369  
 pupil participation in, 109  
 Public relations program, 238  
 Public speaking, 244  
 Pupil (*see* Student)  
 Pupil activities, 41-42, 52, 64-65, 72-74, 86-88, 90, 92-93, 97-146, 229, 238  
 coaches, 93  
 organization of, 105  
 (*See also* Student Activities)  
 Pupil aides, in make-up work, 332  
 in mathematics drill, 312-313  
 Pupil interests, use of, 78

Pupil participation, 65, 86, 89-90, 92-94, 106-108, 111-112, 114, 115, 151, 159  
 in orderliness, 149  
 Pupil planning, 49-50, 75, 97-118  
 Pupil-help plan, 332  
 Pupils, abilities of, special, 226  
 play of, 301  
 underprivileged, 62-63, 65  
 Puppet show, 129

## Q

Questionnaire, graduation, 307  
 Questionnaire, parents', 295

## R

Radio, 343  
 school, 237  
 Radio advertising, analysis of, 187-188  
 Radio broadcasting, student, 382  
 Radio code-practice, 343  
 Radio course, 343  
 Radio homework, 50  
 Radio programs, drill game, 321  
 Radio-operator, student, 253  
 Radio station, student, 146, 382  
 (*See also* School radio)  
 Radio workshop, 286  
*Readers' Guide to Periodical Literature*, 355  
 Reading, 40-42, 46, 70, 318  
 advanced, 142-143  
*Army Reader, The*, use of, 329  
 Bible, 76  
 book reports in, 215  
 as device for teaching, 316  
 dictionary drill in, 318  
 drill in, 310  
 finding main thought in, 37, 354  
 games for teaching, 316  
 group discussions of, 339  
 group work in, 338-339  
 high-school, remedial, 331  
 individual, 40  
 listening habits in, 351  
 materials as concrete aids in, 259  
 oral, 219  
 posters for, 40  
 primary, 123, 126, 317  
 professional, 394  
 readiness in, developing, 315  
 recommended, 368  
 remedial, 318, 328, 354, 391

Reading, vacation, 367  
    vocabulary building in, 319  
    vocabulary drill in, 314, 323  
    word meanings in, 317  
    word recognition in, 312  
Reading ability in science, 344  
Reading adjustment, 354  
Reading to an audience, 351  
Reading drill, 310  
Reading material for able readers, 339  
Reading records, 297  
Reading room, silent, for superior pupils, 88, 338  
Reading skill, 354  
    following directions as, 319  
    stimulating, 75  
Reading technique, 353  
Reading tests, scientific, 339  
Reading-aloud service, 370  
Recipes, testing, 186  
Record folders, cumulative, 297  
Record summaries, 297  
Recording ballads, 222  
Recording equipment, use of, 80  
Recordings, 187, 269  
    catalogue of, 370  
    dramatic, 269  
    instrument, 50  
    foreign language, 242  
Records, anecdotal, 292, 300  
    individual, on reading, 41  
    music, 230  
Recreation, 36, 88, 90, 200  
    (*See also Clubs*)  
Recreation room, 202  
Recreational interests, 83-95  
Reference books, teaching use of, 348  
Refresher courses, 326  
Relaxation, 83-95  
Remedial courses, 325  
Remedial reading, 318, 354  
    specialist in, 9, 354  
Remedial work, coming early for, 328  
    flexible grouping in, 328  
    individual differences in, 325-326  
    matching picture and sentence in, 328  
    types of, 325-326  
Remedial-reading text and work books, use of, 331  
Report-card conferences, 362  
Report cards, revising, 364  
Reports, notes with, 363  
    to parents, 363  
Research, cooperative, 181

Research committee, 163  
Research service, 394  
Resources and facilities for enriched teaching, 336  
Resources of teaching, 33  
Responsibility, developing capacity for, 25, 65, 107, 108, 225-289, 330  
    student, 105, 106, 192, 200-201, 231  
    training in, 105, 112  
Responsiveness, social, 296  
Rhythm, 89, 209  
    rhythm band, 209  
    homemade materials for, 211  
Room library table, 264

## S

Safety, 153, 159  
    (*See also Health and safety*)  
Safety committee, 159, 164  
Safety contest, 74  
Sales promotion, 155  
Salesmen, training by, 252  
Sampling surveys, study of, 185  
Schedule planning, 353  
Schedules and graphs, 321  
Scholarship classes, 342  
School administration, pupil participation in, 148  
    responsibility for, 147  
School bank, 99  
School bus, 158  
School duties, 105  
School farm, 232  
School garden, 101  
School and home, cooperation, 374  
School museum, 27, 282  
School post office, 107  
School radio, 237  
School radio station, 146  
School service center, 114  
School songs, original, 215  
School store, 104, 106, 115, 125, 141  
School-supply store, 107  
Schools, characteristics of good, 5, 13-15, 21-30  
    improvement in, 29-30  
Science, 86, 173  
    accelerated, 344  
    of astronomy, 181  
    barometer study in, 181  
    creative, 221  
    demonstrations in, 221  
    experiments in, 182  
    general, 282

Science, problems in, individual, 345  
 projects in, individual, 221  
 teaching atomic structure in, 271  
 unit plan for different levels of ability in, 341  
 vocational, 241  
 wind tunnel for, 187

Science club, 285

Science collection, 283

Science corner, 174

Science exhibit, 221

Science laboratory, 130  
 experience in, 253

Science library, 270-271

Science research, 182

Science table, 36

Science-room animals, 176

Science-room library, 174

Scrapbook, 282

Secondary education (*see* Grade levels)

Self-confidence, development of, 64, 65, 74

Self-evaluation, courtesy, 367  
 student, 302, 363

Self-government, 26-27

Self-improvement, 75

Self-motivation, practice in, 173

Selling, training in, 252

Seminar, senior, 342

Senior high school (*see* Grade levels)

Service classes, 326

Service organizations, 158

Service room, teaching aids in, 263

Services rendered by schools, changes in, 13-16

Seventh grade, mathematical tricks for, 339

Sewing for boys, 79

Sex education, 287

Sharing experiences, 37-39, 42-43, 74-75, 87, 194-195

Sheet-metal, creative design in, 219

Shop, mechanical, 107, 109, 142  
 student, 116, 117

Shop work, 67-68, 109, 233  
 for girls, 243  
 musical instruments as, 214

Shorthand teaching, 324

Silk-screen printing, 247

Skills, basic, 21-23, 325  
 mastery of, 119-121  
 practice in, 119-121  
 related to use, 23-24

Skills (*see also* *Iowa Basic Skills* test)  
 Slow learner, special help for, 60  
 Snow removal, 102  
 Social activity, first grade, 372  
 Social experience, 82, 114, 124-125, 131-132, 134-135, 154-155, 161, 231, 246, 250  
 Social guides, 14, 405-407  
 Social relationship, 201  
 Social responsibility, 152, 196, 197  
 training in, 193  
 Social sciences, 24-25, 44-45, 87, 132, 135-136, 143, 201, 306

Social studies, of Anglo-American government and institutions, 49  
 basic list of names and dates for, 313  
 bulletin board for, 266  
 of China, 76-77  
 class grouping in, 52  
 committees for, 192  
 community book in, 281  
 correlation of, with music, 178  
 data on, 185  
 devices and materials for, 51-52  
 drill in, 313  
 English and, 133  
 housing survey in, 185  
 individual assignments in, 340  
 investigation in, 170  
 nationality and, 139  
 photographs, use of, in, 280-281  
 planning problems for, 166  
 problems of democracy in, 51-52  
 project for, 184  
 radio program for, 321  
 vocabulary drill in, 314, 322  
 test of maturity in, 328-329

Societies (*see* Clubs)

Society, changes in, 13-16

Sociological principles, 405-407  
 application of, to practice, 38, 58, 71, 85, 100, 122, 150, 171, 191, 206, 227, 260, 276, 294, 311, 327, 337, 350, 360, 378  
 use of, in this book, 14

Soil-testing service, 387

Space, extra, for classes, 395

Spanish, 145  
 foreign language drill in, 323

Speakers, guest, 281  
 outside, use of, 52

Special education, 37, 55-56

Special help, slow learner, 60

Special rooms, pioneer, 41

Specialists, use of, 9, 55-56, 70  
Speech, 73  
    correction of, 207  
        through games, 329  
        through writing, 313  
    specialist for, 9  
diagnosis of, 298  
fundamentals of, 245  
remedial work for, 330  
Speech survey, 297  
Spelling, games in, 318  
    kinesthetic method in, 314  
    selecting own level for, 329  
    tests in, home, 372  
Sports, interscholastic, 94  
Sports committee, 159  
Sportsmanship, 88-89  
Staff participation in school improvement, 29-30  
Staff resources (*see* Resources and facilities for enriched teaching)  
Stagecraft, 248  
Stenographers, student, 115  
Store, cooperative, 116-117  
    play, 125  
    student, 116-117  
Student activities, 138, 181, 202  
    (*See also* Pupil activities)  
Student aides in make-up work, 332  
Student campaigns, 138, 144  
Student cooperation in school improvement, 163  
Student council, 159, 163, 197, 200  
    activities of, 153-154  
Student court, 199  
    problems of, 199  
Student elections, 137-138, 160  
Student government, 111, 156, 195, 199, 201  
Student participation, 111, 149  
Student rating, 158-157  
Student responsibility, 146, 157-158  
Student speakers, 160  
Student-problems forum, 197  
Student-run assembly, 195-196  
Student-teacher council, 152  
Students, exceptional, 342  
    exchange of, 165, 275  
    letters by, exchange of, 279-280  
    slow, in chemistry laboratory, 344  
    superior, 341  
    (*See also* Pupils)  
Study, as a basic skill, 347  
    diagnosis of, 351  
Study, guide to, 349  
    habits of, 348, 351  
    "How to" books, use of, in, 356  
    importance of, 347  
    methods of, 348  
    program for college preparatory, 353  
        planning, 353  
    as reading, 347  
    remedial-reading program for, 348  
    school-wide program for, 348  
    teachers' approach to teaching technique of, 348  
Study techniques, teaching of, 347, 349  
    vocabulary of, 349  
Study-testing program, 348  
Substitute teachers, student responsibility to, 152  
Successful living, program for, 239  
Summer activities, first-grade, 372  
Summer reading, first-grade, 372  
Superintendent-student-council relations, 167  
Superior children, methods of teaching, 335-336  
Surveyor's transit model, 182-183

Table of contents, use of, 349  
Tachistoscope, 316  
Talents, development of, 226  
    pupil, 301  
    special, 23  
Tardiness, 60, 128  
Taxes, study of, 135-136  
Teacher approach to teaching, 36  
Teacher planning, if: experience, 104  
Teacher-principal conferences on individual progress, 299  
Teachers' aides, 106  
Teachers, camps for, 392  
    characteristics of good, 4-6  
    conservative, 15  
    institutes for, 393  
    leaves for, 389  
    local government for, 393  
    new, 392  
    of all subjects, 348  
    physical-education, 391  
    progressive, 15  
    services for, 392, 393  
    vacations for, 392  
    year-round, 88  
Teaching aids, service room for, 268

Teaching objectives, 21-30  
 Teaching problems, solving, 7-8  
 Teaching situation, 35-36  
 Teaching tools, 98-99, 169  
 Technicians' club, 133  
 Techniques, mastery of, 119-121  
 Technology, 15-16  
 Teeth, care and hygiene of, 126, 381  
 Test, articulation, 297  
 teacher-conference method for, 303  
 Testing, assignments in, 293  
 leadership, 298  
 program for, 295  
 Tests, 292  
 aptitude, 225, 304  
 articulation, 297  
 general, 295  
*Iowa Basic Skills*, 328  
 open book, 353  
 shorthand, 324  
 standardized, 292  
 Textiles, study of, 253  
 Theme (*see* Experience themes; Writing)  
 Thermometer, 172  
 Thinking, 24-25, 98-99, 119-121  
 critical analysis of, 43  
 experience in, 24-25  
 securing evidence through, 24-25  
 steps in, 147-148  
 Tools, 119-121  
 on loan, 235  
 (*See also* Equipment)  
 Town council, 287  
 Township government, 287  
 Toy sale, 153  
 Traffic committee, 153  
 organization of, 153  
 Travelers in community, 277  
 Transportation, study of, 280  
 Trips and excursions, 52, 86  
 architectural, 288  
 catalogue of, 280  
 commercial students', 289  
 community, 183, 278  
 field, 253  
 local, 280, 282  
 parents' assistance with, 370  
 planning, 282  
 recorded on film, 282  
 train, 278  
 with purpose, 279  
 scrapbook of, 282  
 student planning for, 151

Truancy, 65  
 Tryout tests, 301  
 Typesetting, 247  
 Typing, 115, 313  
 Typing, nonvocational, 244

## U

Underprivileged groups, 228  
 Underprivileged pupils, 62-63, 65  
 Ungraded class, 328  
 United Nations, 135

## V

Vacation guide, 367  
 Vacation trophies, 44  
 Vacations for teachers, 392  
 Vernier scales, 266  
 Vestibule class, 328  
 Vikings, 42  
 Visiting day, for nurse, 362, 371  
 for ministers as teachers, 287  
 for parents, 373  
 for teacher, 362  
 Visits, teachers', 361  
 Visual aids, 133  
 Visual-aid equipment, 113  
 Visual-aids catalogue, 262  
 Visual-education committee, parents', 370  
 Vitamins, 131  
 Vocabulary, 318  
 basic list for, keying of pictures to, 371  
 building, with dictionary, 319  
 development of, 312  
 drill in, 314, 317  
 social studies, 322  
 games for improvement of, 313  
 improvement of, 81  
 specialized, 80  
 study of, 241  
 study techniques for, 349  
 Vocal music, 219  
 Vocational education speed test, 9, 237  
 Vocational guidance, 386  
 (*See also* Guidance)  
 Vocational mathematics, 269  
 Vocational science, 269  
 Vocational training, 142  
 Vocations, talks about, 285  
 Voting, student, 143

**W**

Weather project, 172  
Weather station, 238  
Weaving, 281  
Weights, problems in, 264-265  
*What Schools Can Do*, 3  
Wilson cloud chamber, 345  
Window-shade-drill device, 315  
Wood-block cutting, 247  
Woodwork shop, 235  
Work experience, 98-118, 253-254  
    banks, 117  
    clerical, 116

Work experience, commercial, 118  
    and habits, 351  
    program for, 274  
Workshop, Italian-American, 289  
Writers' group, 381  
Writers, talks by, 289  
Writing, 102, 109, 381  
    assistance in, 398  
    cooperative, 213  
    creative 205, 208, 239, 243, 250, 342,  
        345  
*Gremlins* in, 324  
for publication, 72  
Writing Club, 213